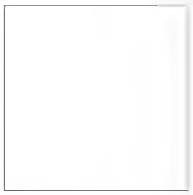
Financing Education – Investments and Returns

ANALYSIS OF THE WORLD EDUCATION INDICATORS 2002 EDITION



OECD

UNESCO
INSTITUTE FOR STATISTICS



FINANCING EDUCATION – INVESTMENTS AND RETURNS

ANALYSIS OF THE WORLD EDUCATION INDICATORS

2002 Edition

UNESCO INSTITUTE FOR STATISTICS
ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
WORLD EDUCATION INDICATORS PROGRAMME

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FOREWORD

Changing economic and social conditions have given knowledge and skills an increasingly central role in the success of individuals and nations. While human capital has long been identified as a key factor in combating unemployment and the problems of low pay and poverty, there is now also robust evidence that it is an important determinant of economic growth and emerging evidence that it is associated with a wide range of non-economic benefits, including improvements in health and a greater sense of well-being.

This has heightened political and social expectations for the achievement of far-reaching social and economic goals through greater human capital investment. These general expectations are likely to be unfulfilled unless specific investments in human capital are well designed to meet desired objectives. This requires a good understanding of the nature of human capital, its role in promoting individual, social and economic well-being, and the effectiveness of various measures designed to enhance its supply.

In searching for effective approaches to human capital development, governments are paying increasing attention to international comparisons. Through such comparisons, countries can learn from each other about how to overcome barriers to investment in education and to secure the benefits of education for all, how to foster competencies for the knowledge society, and how to manage teaching and learning in order to promote learning throughout life.

In many countries, this attention has resulted in a major effort to strengthen the collection and reporting of comparative statistics and indicators in the field of education. In keeping with these national efforts, the OECD and UNESCO have adjusted their statistical programmes in an attempt to meet the growing demand for information on education systems. Building on the OECD indicators programme, 11 countries, together with UNESCO and the OECD and with financial support from the World Bank, launched the World Education Indicators programme (WEI) in 1997. These countries were Argentina, Brazil, Chile, China, India, Indonesia, Jordan, Malaysia, the Philippines, the Russian Federation and Thailand. They first met on 10-12 September 1997 in order to:

- explore education indicator methodology;
- establish a mechanism whereby participating countries could agree on how to make common policy concerns amenable to comparative quantitative assessment;
- seek agreement on a small but critical mass of indicators that genuinely indicate educational performance of relevance to policy objectives and measure the current state of education in an internationally valid, efficient and timely manner;
- review methods and data collection instruments in order to develop these indicators; and
- determine the directions for further developmental work and analysis beyond the initial set of indicators and establish an operational plan and schedule for the implementation of the pilot programme.

Since then, participating countries have contributed in many ways to conceptual and developmental work, applied the WEI data collection instruments and methodology at national levels in collaboration with the OECD and UNESCO, cooperated in national, regional and international meetings of experts,

and worked jointly on the development of the indicators. More countries have since joined the project – Egypt, Jamaica, Paraguay, Peru, Tunisia, Uruguay and Zimbabwe.

In 1999, the growing demand for policy-relevant, timely, reliable and comparable statistics at the international level also led to the creation of the UNESCO Institute for Statistics (UIS). The Institute has become not only an important contributor to the further conceptual and methodological development of the WEI programme but is also progressively incorporating many WEI activities into its own programme of work. It is extending the WEI objectives and processes to a much wider range of countries through both regional and national development programmes.

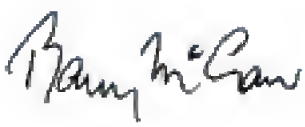
This report is the third in a series of publications that seeks to analyse the WEI indicators in areas of key importance to governments, bringing together data from participating countries with comparable data from OECD countries. Its main objective is to provide crucial evidence on the role of human capital and, by implication, education in fostering economic well-being as well as on financing strategies that may help governments to allow the different public and private actors and stakeholders in education to participate more fully and share costs and benefits more equitably.

Despite the significant progress that has been accomplished during the first years of the WEI programme in delivering policy-relevant and internationally comparable education indicators, the indicators presented should not be considered final but have been and continue to be subject to a process of constant development, consolidation and refinement. Furthermore, while it has been possible to provide for comparisons in educational enrolment and spending patterns, comparative information on the quality of education in WEI countries is only beginning to emerge. New comparative indicators will be needed in a wider range of educational domains in order to reflect the continuing shift in governmental and public concern away from control over inputs and content towards a focus on educational outcomes.

The countries participating in the WEI programme together with UNESCO and the OECD are, therefore, continuing with the development of indicators and analyses that can help governments bring about improvements in schooling and preparation for young people as they enter an adult life of rapid change and increasing global interdependence.



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INTRODUCTION

THE IMPACT OF EDUCATION ON THE ECONOMIC ACTIVITY OF INDIVIDUALS AND SOCIETIES

There is now robust evidence that human capital is a key determinant of economic growth and emerging evidence indicates that it is also associated with a wide range of non-economic benefits such as better health and well-being. Investment in human capital and, by implication, education has thus moved to the centre stage of strategies to promote economic prosperity, fuller employment and social cohesion in countries participating in the OECD/UNESCO World Education Indicators (WEI) programme.

Information and communication technology, globalization of economic activity and the trend towards greater personal autonomy and responsibility have changed the education demands of individuals and nations. Education is also increasingly considered an investment in the collective future of societies and nations, rather than simply the future success of individuals. However, it takes more than great expectations to achieve the benefits that can flow from greater investment in human capital; it takes a good understanding of the nature and role of human capital and how to design specific measures to enhance its supply.

At present, these issues are imperfectly understood and measured in terms of capturing human capital in its various forms, analysing the relationships with individual and social outcomes, and measuring human capital formation, stock and returns. Human capital needs to be more broadly understood as the knowledge, skills, competencies and attitudes embodied in individuals that facilitate the creation of personal, social and economic well-being. However, so far it has only been possible to develop limited cross-nationally comparable proxies for human capital, largely in the form of years of initial formal education. Equally important, rather than examining the relationships between human capital and the various aspects of personal, social and economic well-being, existing cross-national evidence is only available on attributes that have benefits via economic activity.

Despite these limitations, this report brings together crucial evidence on the role of human capital and education in fostering economic well-being for both individuals and societies in WEI countries.

The report begins by showing that better-educated people are more likely to be working and, if economically active, less likely to be unemployed. In all WEI countries, labour-force participation rates increase with the level of education attained by individuals. Better qualifications also attract better wages for individuals. In some WEI countries, these wage premiums are very large, reflecting a greater wage spread in the labour market and possibly higher returns to particular skills. One noteworthy pattern is that, while earnings increase with each additional level of education in most countries, upper secondary and especially tertiary educational attainment constitute an important threshold in Brazil, Chile and Paraguay. For men, the earnings advantage of tertiary compared to upper secondary education ranges from 82 per cent in Indonesia to almost 300 per cent in Paraguay. Overall, WEI countries in Latin America display the largest variations in income by educational attainment, while WEI countries in Asia reflect less income inequality as educational attainment rises.

One way of assessing the impact of human capital on national performance is by measuring the impact of various factors on growth in gross domestic product (GDP), as one important component of economic well-being. It is apparent that economic well-being and, even more so, GDP alone cannot adequately reflect the various aspects of human well-being which, for example, also include the enjoyment of civil liberties, relative freedom from crime, a clean environment and individual health. At the same time, the

role that economic growth plays in this equation should not be underestimated. Growth in economic output not only provides the resources for tackling social exclusion, poverty and poor levels of health but also expands the range of human choice. Economic well-being – flowing from economic output – should thus be recognized as an important component of human well-being.

GDP, in turn, has significant limitations as a measure of economic output. It captures current production of those consumption and investment goods and services accounted for in the National Accounts but excludes non-market household activity (such as parenting) and activities such as conservation of natural resources that contribute to future well-being through net additions to the capital stock of society. GDP also includes goods and services which do not contribute to well-being as exemplified by so-called 'regrettables' arising from outcomes such as pollution or crime. Nevertheless, GDP is clearly a significant component of economic well-being and the only one that the report found to be measured reliably across countries and over time.

The relationship between human capital and economic growth can be assessed through cross-country regressions of data incorporating explanatory variables for physical capital, education, level of income and, in some cases, proxy variables for various social and institutional factors. Some studies have pursued such analyses by including both developing and developed countries. This increases the power of the statistical tests employed because of the greater variation in the posited determinants of growth. However, it also implicitly assumes common determinants of growth in developing and developed countries. This assumption is often difficult to justify.

For the purpose of this report, the analysis has, therefore, been conducted separately for WEI and OECD countries. The result of the analysis is a consistently strong and positive association between improvements in the stock of human capital and economic growth among WEI countries, an association that is even greater than that observed among OECD countries. On average, improvements in human capital may have accounted for about half a percentage point in the annual growth rates of almost all WEI countries in the 1980s and 1990s compared to previous decades. In the OECD, only Greece, Ireland, Italy and Spain attained similar levels. Overall, the results suggest that for every single year for which the average level of schooling of the adult population in WEI countries is raised, there is a corresponding increase of 3.7 per cent in the long-term economic growth rate.

The link between human capital and economic growth has been strongest in Argentina, Chile, Jamaica, Malaysia, Peru, the Philippines and Uruguay over the past two decades and, in the 1990s, for Brazil, Indonesia, Thailand and Zimbabwe. The impact of human capital on economic growth has been more limited in Egypt, India and Tunisia which started off with considerably lower levels of educational attainment. This pattern may suggest that human capital plays a stronger role in the growth process once the level of human capital reaches a critical threshold. In that respect, the strong correlation between schooling and growth performance in Argentina, Chile, Malaysia and Uruguay suggests that high levels of upper secondary and tertiary attainment are important for human capital to translate into steady growth.

A comparison of growth patterns between WEI and OECD countries or between WEI countries at different stages of industrialization further suggests that, while capital investment is most strongly associated with growth at early stages of industrialization, the role of human capital increases with industrial development and overall level of educational attainment and eventually takes over as a strong driver of economic growth.

PREPARED FOR THE FUTURE?

As WEI countries move towards 'knowledge-based' economies, the importance of human capital will continue to grow. In the foreseeable future, knowledge workers will be a prominent and in some WEI countries perhaps the dominant group in the workforce, a workforce that will be increasingly borderless because knowledge travels even more effortlessly than money. These knowledge workers will also have a high degree of upward mobility because knowledge will potentially be available to everyone.

Some forecasts suggest that by 2020 – a date that may seem far away but, in reality, is about the time it would take for current school reform to show its effects in the labour market – manufacturing output in many of the WEI countries will at least double while manufacturing employment will shrink, at least in the most economically developed WEI countries, to 10–15 per cent of the total workforce. Manufacturing jobs will increasingly be replaced by knowledge-intensive work with knowledge becoming the key economic resource and, without effective investment in human capital, a scarce one. However, with effective investment, this key economic resource can become a renewable one because, in theory, human knowledge and its applications are, unlike many natural resources, infinite.

Are WEI countries prepared for these challenges? One way of examining this question is to look at the current rates of output of educational institutions. In this regard, the report provides evidence of the significant progress that WEI countries have achieved in raising access to and participation in education over the past generation. In Argentina or Brazil, the school expectancy of a 5-year-old child is now around 16 years, whereas the average years of schooling for adults, reflecting the historical outcomes of these countries, is about half that level. Among WEI countries, seven nations now enrol more than 90 per cent of their youth populations up to age 15, namely Argentina, Brazil, Chile, Jamaica, Peru, the Russian Federation and Uruguay. These enrolment rates will allow for significant progress in human capital availability as better-educated young people join the workforce.

Enrolment patterns, however, provide only part of the picture. The translation of increased access to school into increased availability of human capital depends critically on participation and the successful completion of higher levels of educational programmes. At the upper secondary level, which the first part of the report links critically to individual economic success, graduation rates range from about 30 per cent of the population of typical graduation age in Indonesia and Tunisia to more than 60 per cent in Jamaica, Jordan, Malaysia and the Philippines. Wide differences can also be observed at the tertiary level. Graduation rates in the Russian Federation reach the OECD benchmark for university-level tertiary programmes at around 27 per cent of the population of typical age. Other WEI countries that display high tertiary graduation rates are Chile, Malaysia and Thailand. By contrast, Brazil, China, Paraguay, Tunisia and Uruguay see barely 10 per cent of their corresponding cohorts graduate from tertiary education.

Despite significant progress, the report reveals that much more needs to be done to attain the educational standards currently reported by typical OECD countries. The dramatic gap in the school expectancy of the young and the actual educational attainment of the adult population suggests that efforts to this end will need to go far beyond basic education and target the specific skill gaps in the adult workforce.

Shifts in the demographic composition of the population, which many though not all WEI countries will be experiencing in coming decades, will make these challenges even more significant. At one

extreme, the report estimates that Paraguay, Malaysia and Jamaica would require additional investments in education amounting respectively to 2.6, 1.6 and 1.0 per cent of their current GDP just to reach current WEI averages in upper-secondary educational participation rates.

PROVIDING AND PAYING FOR REQUIRED EDUCATIONAL SERVICES

The goals of expanding education systems and maintaining equitable access to education seem inextricably linked to questions of education finance: How much do countries invest in education? How do governments support schools? What role does the private sector play in provision of education? How do students and households contribute financially to education? Perhaps the main question is: who pays for education in WEI countries? In past decades, some WEI countries have achieved rapid educational progress as a result of proactive but often costly education policies. At the same time, other governments have invested markedly less in education and educational progress has been much slower. Thus, the question of whether current funding patterns need to adapt is also relevant.

To address these questions, the second part of the report begins by describing overall levels of public and private resources for education in WEI countries, focusing on levels of funding and whether countries with similar economic resources and student populations are investing more or less in education. It also looks at how these resources are distributed across levels of education in the context of a broader rationale for public spending on education. It then continues with an examination of public sector spending and finally looks at the private sector as both a provider of educational services and a source of educational expenditure.

The level of public and private investment in education varies widely among WEI countries, from 1.5 per cent of GDP in Indonesia to 9.9 per cent of GDP in Jamaica. How this investment is distributed across education levels also varies. In Zimbabwe and the Philippines, 55 and 71 per cent of public education expenditure, respectively, is spent on primary education, which corresponds to the high share of primary students among the total number of students. At the same time, due partly to the high cost of educating a tertiary-level student, public funding levels for tertiary education are often disproportionate in relation to the share of students, as is the case in Zimbabwe, China and Tunisia.

New funding strategies aim not only at mobilizing the required resources from a wider range of public and private sources but also at providing a broader range of learning opportunities and improving the efficiency of schooling. In the majority of WEI countries, publicly funded primary, secondary and post-secondary non-tertiary education is also organized and delivered by public institutions, but in a fair number of WEI countries public funds are transferred to private institutions or given directly to households to spend on the institution of their choice. In the former case, the final spending and delivery of education can be regarded as subcontracted by governments to non-governmental institutions whereas, in the latter case, students and their families are left to decide which type of institution best meets their requirements. In fact, in most WEI countries, a proportion of public funding goes towards private schools and, at the same time, there are significant private contributions to public schools. Other types of distinctions between public and private can be more relevant than sources of funding, including ownership of property and buildings, and control over curriculum, admissions, teacher appointments and payment, and supplies.

In light of public budget constraints, it is often argued that efforts to expand the reach of secondary and post-secondary education institutions can only move ahead with greater cost-sharing and the wider implementation of 'user fees' for educational services. The argument continues that, from the perspective of equity, greater cost-recovery should be sought at higher levels of education where individual returns are the highest. Others argue that such an approach may come at the expense of equitable access for post-secondary education among poorer households and individuals. Concerns have been raised that extending user fees in the education system creates barriers to participation and undermines a commitment to equality of educational opportunity, a commitment that is also important to national economic and social goals. Maintaining the balance between these two positions is often a difficult challenge for WEI governments.

To weigh these questions, the report establishes a nuanced picture of the public and private stakeholders involved, the way they share the management and financing of educational institutions, and what constitutes the underlying financing mechanisms. The report reveals large differences in household expenditure per student across countries. For primary and secondary levels of education, the share of private expenditure ranges from two per cent in Jordan to 36 per cent in Chile. Such private spending on education includes direct payments to educational institutions that take on several different forms: student tuition or fees; other fees charged for educational services; fees paid for lodging, meals, health services and other welfare services provided to students by and at educational institutions. While most expenditure goes towards fees and other costs related to private schools, a certain proportion is spent on public schools. The proportion of costs per student that is made up by private contributions at the tertiary level is considerably larger. The share is by far the highest in Chile (73 per cent) followed by Indonesia (48 per cent), then Peru (45 per cent), even though enrolment levels in these countries vary considerably.

The report shows that the level of household expenditure often depends on the type of school, as public schools require fewer fees than government-dependent or independent private schools. For example, in Paraguay, students and households play only a very small role in the financing of education in public schools. Parents make voluntary contributions to primary schools to provide additional funds for maintenance and supplies which are not covered by the state budget. In upper secondary education, families pay an annual tuition fee and other laboratory and related fees. The fees are typically paid directly to the school which uses the funds to purchase goods and services. By contrast, in government-dependent private schools in Paraguay, private households pay tuition and fees at all levels since the state does not pay the salaries of all teachers. In independent private schools, private households pay tuition and fees that must cover the full cost of provision since the state does not subsidize independent private schools.

In some WEI countries, such as Indonesia, tuition fees are set by the state. In other countries, fees are set only for the public sector and are unregulated in the private sector. In a number of WEI countries, parent-teacher associations play an important role in setting fee structures, collecting fees from households and even in spending funds at the primary and secondary school levels. These fees often support school activities, primarily extra-curricular activities and sports events.

At the tertiary level of education, private contributions (and private providers) are much more prominent in WEI countries than in most OECD countries. Although the expansion of education appears to imply a proportional increase in resources, governments are proving increasingly unable to cope alone with the costs of developing participation in higher education. At the same time, while expansion of higher

education should permit more equitable access, what often happens instead is a strengthening of exclusion mechanisms. Issues of access should be considered relatively more important in countries with high levels of disparities. Low-income families cannot afford higher studies for their children because of the rising cost of such studies and the difficulty experienced by states in investing further.

Private schooling, whether financed through public or private sources or through a combination of both, has arisen as a response to different contexts. One of the more common contexts is that of excess demand due to shortfalls in public-sector supply, which private schools then meet. Private schools have also emerged in response to differentiated demand, i.e. offering specific educational opportunities that are not provided by the state. These range from elite academies to schools with religious content and those that cater to drop-outs from public schools. Thus, across WEI countries, the term 'private school' is interpreted in many different ways.

The distribution of enrolment across types of educational institutions reflects the relative importance of the private sector in educational provision. In nine out of 16 WEI countries, the proportion of private primary enrolment exceeds 10 per cent. Zimbabwe has the largest proportion of private primary enrolment with almost 9 in 10 children enrolled in government-dependent primary schools that are managed at the community level. The smallest proportion is found in the Russian Federation (0.4 per cent) where less than a decade ago private schools were illegal. In comparison to OECD countries, WEI countries have a somewhat higher proportion of primary students enrolled in the private sector. The majority of OECD countries have, on average, about 1 in 10 pupils enrolled in private schools at the primary level. At the secondary level, private enrolments are more prevalent and the share found in WEI countries is closer to that found in OECD countries. Nonetheless, at each educational level, almost every WEI country exceeds the OECD average share for independent private enrolment.

An intriguing question concerns the relationship between the management of educational institutions and the quality of their learning outcomes. The report seeks to address this question in its last part on the basis of international assessments such as the *Primer Estudio Internacional Comparativo* (PEIC) and the *OECD Programme for International Student Assessment* (PISA). However, the outcomes from these analyses remain mixed and often do not generally suggest significant effects associated with public and private school management once other factors, such as differences in the socio-economic intake of schools, have been accounted for.

As the report shows, cost-sharing between participants in the education system and society as a whole is an issue that is under discussion in many WEI countries and is likely to become more prominent in the future. This question is especially relevant at the beginning and ending stages of initial education – pre-primary and tertiary education – where full or nearly full public funding is less common. As new client groups participate increasingly in a wide range of educational programmes and have more opportunities made available by increasing numbers of providers, governments will need to continue forging partnerships to mobilize the necessary resources to pay for education and to design new policies that allow the different actors and stakeholders to participate more fully and share costs and benefits more equitably.

As the role of private sources is becoming more important in the funding of education, attention is needed to ensure that this balance does not shift so far as to keep potential learners away from education instead of drawing them towards it.

READER'S GUIDE

Definitions and methods

The World Education Indicators programme (WEI) places great importance on the cross-country validity and comparability of the indicators. To accomplish this, participating countries have endeavoured to base the collection of data on a common set of definitions, instructions and methods that were derived from the OECD Indicators of Education Systems (INES) programme.

The annexes to this report provide the definitions and methods that are most important for the interpretation of the data in this publication, as well as notes pertaining to reference periods and data sources.

There are five annexes:

- ***Annex A1*** provides general notes pertaining to the coverage of the data, the reference periods and the main sources for the data.
- ***Annex A2*** provides definitions and technical notes that are important for the understanding of the indicators presented in this publication (the notes are organized alphabetically).
- ***Annex A3*** provides a cross-reference between tables and technical notes.
- ***Annex A4*** provides the full set of data tables used in this publication.
- ***Annex A5*** documents the classification of 19 WEI countries' educational programmes according to the 1997 International Standard Classification of Education (ISCED97).

The full documentation of national data sources and calculation methods is provided in the OECD 2002 edition of *Education at a Glance* and on the OECD web site: www.oecd.org/els/education/eag2002

In order to enhance the comparability of the indicators, countries participating in the WEI programme have also implemented a new standard for the classification of educational programmes – ISCED97, which was developed by UNESCO to enhance the comparability of education statistics.

Important notice to readers

While comparability of the data is a prerequisite for the validity of international comparisons, it often poses challenges for the interpretation of the indicators within the national institutional context. This is because the implementation of internationally comparable standards and classifications requires countries to diverge from national institutional structures.

For example, education that is classified as ISCED Level 1 in this report (primary level of education) does not correspond strictly in all countries to the grades in which primary education is provided because the number of grades associated with primary education varies greatly between countries. For some countries, grades typically associated with primary or basic education are classified as lower secondary education in this report.

Readers are thus invited to refer to the detailed allocation of individual national educational programmes according to ISCED97 provided in Annex 5 for an easier interpretation of the data within a national context.

Similarly, readers should be aware that the use of international definitions and methods for the coverage of education data and the calculation of indicators may yield different estimates from those obtained with national sources and methods.

WEI data are the result of a continuous process of convergence towards an international framework that is itself evolving over time. As a result, the coverage of data has changed over time for many WEI countries, especially in the field of education finance where definitions were amended following the OECD *Second Finance Comparability Study* in 1999/2000.

Readers are thus discouraged from using WEI data to analyse trends over time, since these data are not strictly comparable from year to year. Future editions of the WEI report will provide trend data based on stable data coverage and calculation methods.

Coverage of the data

Although a lack of data still limits the scope of the indicators in many WEI countries, the coverage extends, in principle, to the entire national education system regardless of the ownership or sponsorship of the institutions concerned and regardless of education delivery mechanisms.

With one exception described below, all types of students and all age groups are meant to be included: children (including those classified as exceptional), adults, nationals, foreigners, as well as students in open distance learning, special education programmes or educational programmes organized by ministries other than the Ministry of Education provided that the main goal of the programme is the educational development of the individual. However, vocational and technical training in the workplace, with the exception of combined school and work-based programmes which are explicitly deemed to be part of the education system, is not included in the basic education expenditure and enrolment data.

Educational activities classified as 'adult' or 'non-regular' are covered, provided that the activities involve studies or have subject-matter content similar to 'regular' education studies, or that the underlying programmes lead to potential qualifications similar to those gained through corresponding regular educational programmes. Courses for adults that are primarily for general interest, personal enrichment, leisure or recreation are excluded.

Calculation of international averages

The WEI and OECD country means, which are often provided as a benchmark, are calculated as the unweighted mean of the data values of all WEI or OECD countries for which data are available or can be estimated. The country means, therefore, refer to an average of data values at the level of national systems and can be used to illustrate how an indicator value for a given country compares with the value for a typical or average country. They do not take into account the absolute size of the education system in each country.

Chapter 1

INVESTING IN HUMAN CAPITAL AND RETURNS

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OECD

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INTRODUCTION

Education and human capital are increasingly recognized as drivers of economic growth.

The role of education and human capital in promoting the performance and growth of economies is increasingly recognized. A recent OECD study pointed to human capital as the single-most important engine of growth in OECD countries over the past three decades (OECD, 2000). The questions examined in this chapter then are: Do WEI countries, which are typically at earlier stages of industrialization and development, display similar patterns and mechanisms? Do their educational policies and levels of educational investments reflect an awareness of the importance of education for economic and social prosperity? And, most importantly, how do policy-makers ensure adequate investment in education in light of demographic and economic constraints?

From a budget perspective, WEI countries invest a larger share of their public budgets in education than do OECD countries, 15.6 per cent of total public expenditure on average compared to 12.7 per cent. However, this comparatively bigger commitment occurs within the context of smaller public sectors that average 27.9 per cent of GDP in WEI countries compared to 42.4 per cent in the OECD (see Table 1 in Annex A4). As a result, the WEI country average for public spending on education is 4.3 per cent of GDP compared to 4.9 per cent in the OECD.

WEI public education efforts also target a much larger student population in relative terms, resulting in lower resources available per student compared to OECD countries. Public spending is thus supplemented by a stronger contribution from the private sector in WEI countries; at 1.7 per cent of GDP, it is 1.1 percentage points above the corresponding OECD contribution. As a result, overall spending on education from public and private sources does reach OECD benchmarks in terms of national wealth with WEI and OECD countries spending similar shares of GDP on education at 5.5 per cent. WEI expenditure per student remains, however, below OECD levels in absolute terms.

Access to and participation in education are more limited in WEI countries than in OECD countries, especially at upper secondary and tertiary levels.

Still, access to and participation in education are more limited in WEI countries, especially at the upper secondary and tertiary levels where considerable progress remains to be achieved. At the turn of the new century, school expectancy for five-year-old children in WEI countries was almost four years below the OECD average. This difference largely resulted from differences in participation in upper secondary and tertiary education – the levels where the skills needed for the new global economy are acquired. This pattern raises questions about the extent to which the mechanisms that translate human capital into economic growth in OECD countries are also found in WEI countries.

Expanding education participation in the upper secondary and tertiary levels of education is a considerable challenge for WEI countries despite their lower unit costs. Demand is high. Now that most WEI countries have reached the goal of universal primary education, or are getting close to it, educational authorities face growing pressure to expand access to higher levels of education. Not only is a greater share of young people in these age groups willing to pursue higher education, but the populations in these age groups are also growing in most WEI countries. Expanding access at these levels thus requires enormous investments in school infrastructure and the recruitment of a high number of qualified teachers. The likely effect will be to increase the financial burden of education dramatically.

Expanding upper secondary and tertiary education to meet demand will increase the cost of education dramatically.

Educational authorities in WEI countries also face growing pressure to improve the efficiency, quality and equity of education – especially with the publication of the first results of the Programme of International Student Assessment (PISA), an international comparative survey carried out in nearly all OECD countries and in Brazil and the Russian Federation of the WEI group. PISA describes how effectively education systems prepare young people for life (OECD, 2001).

PISA also provides insight into the key policy levers that influence the learning outcomes of students. It measures the ability of students to use their knowledge for daily living and further learning, and points to their capacity to undertake lifelong learning that is needed to compete economically and contribute socially in an increasingly knowledge-intensive world.

PISA results carry important messages for policy-makers in WEI countries. First of all, the assessment results show big disparities in educational outcomes, not only across countries but also among different socio-economic groups within countries. This suggests that, even in countries with universal access to basic education, the equity issue looms large.

Indeed, among the key determinants of student achievement, PISA emphasizes engagement in reading, self-regulated learning skills, student-teacher relations and the socio-economic background of students. One noteworthy finding is that the strong effect of socio-economic background on student achievement can be mitigated by lower student-teacher ratios, availability of resources such as libraries and computers, and more teachers with tertiary qualifications in the field they teach. However, reforms aimed at deploying school resources and qualified teachers equitably throughout the country are likely to contribute to upward pressures on unit costs and levels of investment.

Overall then, WEI countries face various and strong pressures for higher levels of investment in education while their financial resources are limited.

Governments face challenging trade-offs and choices as well as a real need to improve the cost-efficiency of their education systems.

WEI countries face strong pressures for greater investment in education but their financial resources are limited.

In an effort to provide insights into available options and their returns, this chapter examines the actual impact of education and human capital on the macroeconomic performance of WEI countries as well as the labour market outcomes of education for individuals. Current levels of human capital availability and future projections are examined, followed by an analysis of current levels of investment in education and likely changes given demographic trends and policy options.

Section 1 sets out the broad rationales for investment in education, both from a macroeconomic perspective, and, at the individual level, in terms of labour market outcomes. *Section 2* offers an analysis of past and future trends in educational participation and attainment, and of current levels of investment in education in WEI countries. *Section 3* envisions the impact of demographic constraints and policy goals on education expenditure and the changes in levels of investment needed to achieve national policy goals.

This establishes the context for Chapter 2 which provides a detailed analysis of the range of modalities in financing education in WEI countries.

1 HUMAN CAPITAL AND ECONOMIC PERFORMANCE: SOCIAL AND INDIVIDUAL OUTCOMES OF EDUCATION

The important role of human capital in economic and social progress is internationally recognized.

The role of human capital in the development of nations has long been recognized and education has traditionally been given strong emphasis in the budgetary efforts of WEI countries, especially in the wake of independence in former Western dependencies. At that time, national policy-makers widely viewed education as important for economic growth and for social progress and development. It was generally believed that education should be given a major role in national development strategies and allocation of budgetary resources.

However, in the late 1970s and 1980s, this belief in education was somewhat overshadowed by external debt crises in WEI countries and other emerging economies that shifted national priorities towards structural economic reform and growth-enhancing policies which emphasized price stability, debt control and balanced budgets. However, the controversial impact of these structural adjustment policies on the social sector led national and international stakeholders to revisit the importance of the social side and, in particular, education for the development process. Over the past 15 years, the importance assigned to education in the economy has re-emerged, thanks also to a new body of research on economic growth that investigates the channels through which education and human capital accumulation impact economic performance.

New theories on economic growth assert that some factors involved in the production of goods and services – most notably human capital or knowledge – may constitute an 'infinite' engine of economic growth. That is, they generate positive externalities through which individual decisions interact with each other and result in outcomes greater than the sum of individual ones. For example, individuals invest in education for their own benefit but their investment increases the general level of knowledge in society which, in turn, facilitates the accumulation of knowledge by others and so on. What starts as an individual decision actually becomes a self-amplifying virtuous cycle.

Externalities may also arise from the intergenerational transmission of human capital, based on the observation that parents' education is a strong predictor of children's educational outcomes through, for example, the transfer of attitudes and values related to education and direct involvement in their child's learning efforts. Thus, individual decisions to invest in education have spillover effects that affect individuals across society in the present and future.

Recent economic research shows that individuals who invest in education benefit not only themselves but increase the general level of knowledge in society.

This emphasis on education and human capital in recent research does not overlook other determinants of economic growth performance. On the contrary, human capital is often envisioned as a necessary *but not sufficient* prerequisite for economic growth. As a matter of fact, researchers have refined the relationship between human capital and growth by investigating potential interactions between human capital and other variables such as the level of trade openness or the impact of institutional and political contexts. Besides, the mass of theoretical literature on the determinants of economic growth has been accompanied by an equally important empirical literature that tries to assess the empirical relevance of these transmission channels and the quantitative impact of various factors on the growth and development process of nations.

Policy-makers acknowledge the importance of building skilled labour forces to compete in a dynamic global economy.

On the policy scene, the growing academic interest in the role of education and human capital in economic performance has translated into a renewed acknowledgement by policy-makers of the importance of building skilled labour forces to meet the challenges of an increasingly dynamic, global and competitive economic system. Beyond its impact on economic performance, education also contributes to social progress, especially through its positive effect on democratic participation, social cohesion and the fight against poverty. National development plans and budgetary efforts in WEI countries have reflected this renewed appreciation of education as illustrated by the increase in central government spending on education between the 1980s and 1990s from 3.7 to 4.0 per cent of GDP on average (see Table 19 in Annex A4).

At the international level, recognition of the multiple benefits of education as a means to improve economic and social well-being resulted in education being called the "single most important key to development and to poverty alleviation" by the World Bank (World Bank, 1999).

Given this context, it seems appropriate to review the role that education and accumulation of human capital have played in the economic performance of WEI countries in past decades. Here, econometric techniques have been used to quantify the social returns to education. It is equally important to examine the outcomes of education from the perspective of individuals engaged in the process of human capital accumulation.

Human capital and economic growth

Extensive empirical research has shown the impact of human capital and education on economic growth.

Over the past 15 years, substantive empirical economic research has attempted to assess the quantitative impact of different variables on economic growth. Among these variables, the role of human capital has been given a strong emphasis.

The recent development of empirical work was sparked a decade ago by a research paper presenting growth regressions using primary and secondary enrolment rates in the 1960s as explanatory variables of the subsequent growth performance of a cross-section of nations (Barro, 1991). This study revealed a positive impact of human capital on growth. Subsequent studies that replicated these regressions with panel data or different econometric techniques provided, however, mixed evidence of the impact of human capital on growth performance. In general, while measures of initial levels of human capital appeared positively related to subsequent performance (Mankiw et al., 1992; Barro and Sala-I-Martin, 1995), their evolution over time has not proved to be statistically related to economic growth in studies based on panel data (Benhabib and Spiegel, 1994; Pritchett, 1999; Temple, 1999 for a review).

Explanations for these contradictory results have been sought in the type and quality of education data used to proxy the availability of human capital in an economy. For example, in terms of quality, the international comparability of education participation data in the 1960s has been questioned. More importantly, the appropriateness of this *type* of data to act as a substitute measure of human capital availability has been strongly criticized. Participation in education can proxy human capital availability in younger cohorts of the workforce at best, whereas the stock of knowledge and skills available in the entire workforce also results from past participation rates. Hence, similar increases in participation rates may have a differentiated impact on countries' average levels of skills (and stocks of human capital) depending on their education participation trends. For example, in countries

that faced a recent and rapid expansion of education participation, younger cohorts replace far less-educated older cohorts, and improvements in educational attainment of the younger population translate into significant increases in average skills of the workforce. By contrast, similar progress in the level of educational attainment of younger cohorts will have a lesser impact on overall levels of skills in countries where participation trends have been more stable over time. In order to better assess the role of human capital for economic performance, human capital data sets using stocks of human capital – rather than flows – have been developed.

Progress in measuring human capital yields a positive effect of education on growth in OECD countries.

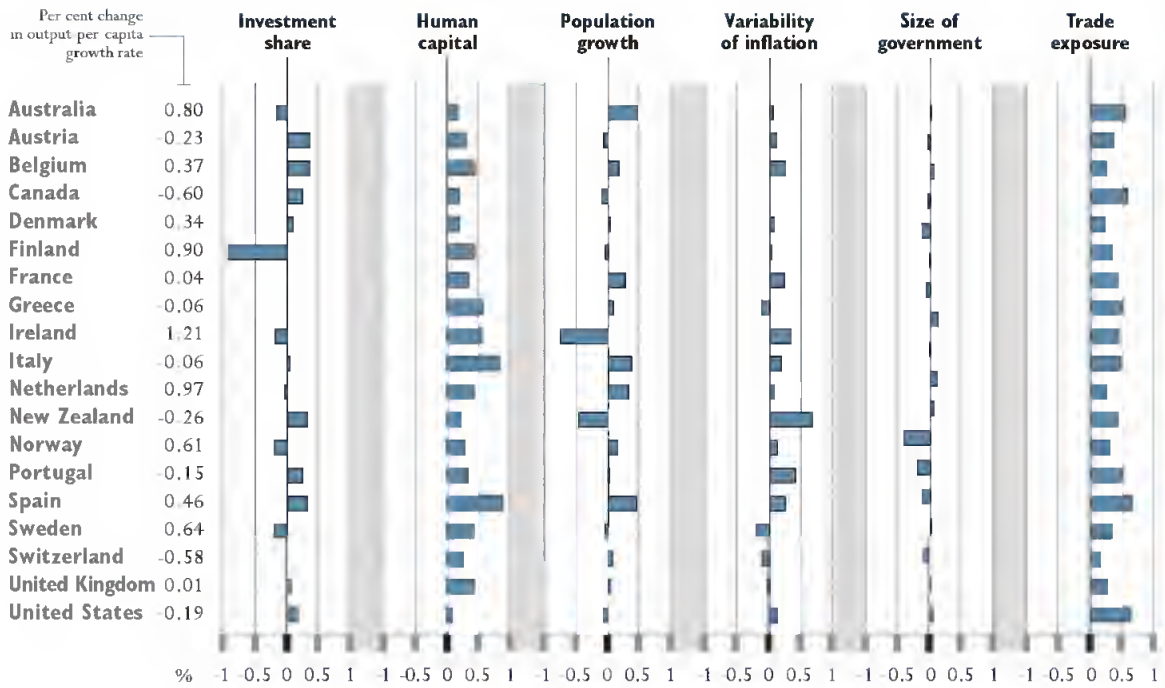
In 2000, the OECD carried out an extensive project on the economic growth process of its member countries. It measures the relative influence on growth of the level of investment in capital, population trends, variability in inflation, trade exposure, the institutional framework (approximated by the size of the government sector) and the level of human capital (OECD, 2000). In this study, human capital is approximated by the average number of years of schooling in the working-age population (De la Fuente and Domenech, 2001).

This study shows unambiguously that over the period 1971–1998, economic performance and human capital have been positively correlated in OECD countries, even after accounting for other factors involved in the growth process. In fact, improvement in human capital has been one of the key factors tied to the recent growth of OECD countries. The other key variables that shaped OECD growth performance are physical investment (with mixed contributions across countries and over time) and increased trade liberalization and exposure – with strong positive association with growth in all countries.

Population growth is also positively associated with per-capita-output growth rates in most countries (with the exception of countries with fast-growing populations such as Ireland, New Zealand and, to a lesser extent, Canada). Lastly, reduced inflation variability was positively associated with economic growth in most OECD countries over the past decade, while the size of government displayed a mild negative association with the growth performance of some OECD countries, most notably Norway, Portugal and Finland (see Figure 1.1).

Overall, the OECD study concludes that the estimated long-term effect on GDP of one additional year of education in the population aged 15–64 is around 6 per cent on average. Furthermore, the social returns to investments in education seem slightly larger than those experienced by individuals in OECD countries. The study thus provides some support for the idea that investing in education can generate positive externalities arising from human capital accumulation (see Bassanini, Scarpetta and Hemmings, 2001).

Figure 1.1
Decomposition of changes in annual average growth rates of GDP per capita in OECD countries by explanatory variable, over the period 1980s to 1990s



Source: *OECD Economic Outlook*, December 2000.

Even though WEI countries have been included in many international empirical studies of economic growth, it is difficult to make comparisons with OECD countries due to differences in the explanatory variables considered, estimation techniques and the data used. The recent release of a similar data set on human capital covering most WEI countries has, however, allowed these limits to be overcome (see Box 1.1).

Economic growth patterns in WEI countries appear positively associated with human capital accumulation.

In the case of WEI countries, the comparison of achievements in human capital accumulation and economic performance both across countries and over time gives an initial idea of the mechanisms involved in the growth process. In Figure 1.2, economic performance is approximated by GDP expressed in terms of the working-age population rather than total population in order to avoid problems related to international differences in the demographic structures of WEI populations (see Box 1.2).

WEI countries have seen clear progress in the education level of their adult populations...

Several patterns emerge from Figure 1.2. Clear progress in the level of educational attainment of the adult population can be observed in WEI countries. Over time the distribution of countries in the figure clearly moves to the right, indicating an increase in average levels of human capital. As a

Box 1.1

Data on human capital stocks

A longitudinal data set of human capital stocks was recently computed for WEI countries, following a methodology previously used to estimate human capital stocks in OECD countries. The aim of this data set is to provide an alternative to measures of human capital flows, such as enrolment rates, widely used in econometric studies of the role of education in economic growth. Instead, the data set documents the evolution of stocks of human capital over time. In this study, human capital stock is approximated by the average number of years of schooling in the working-age population and is derived from data on educational attainment of the adult population, and assumptions about the number of years of education implied by different levels of educational attainment (Cohen and Soto, 2001).

The methodology consists of using as much direct data as available through national censuses or WEI data for recent years and filling in data gaps with backward and forward extrapolations of existing data on educational attainment.

The starting point is UN data on the distribution of the population by age group in 1960, 1970, 1980, 1990 and 2000. When directly observable data on educational attainment of the population by age group exists, it is used to process average years of education in the population. When no direct data is available, existing data is extrapolated by assuming that the distribution of the population aged 35-44 in 1980 by level of educational attainment is the same as the distribution of the population aged 25-34 in 1970 (backward extrapolation) or the population aged 45-54 in 1990 (forward extrapolation). This procedure relies on the strong assumption that mortality and migrations have no impact on the structure of the population by educational attainment. Since the methodology keeps extrapolations and estimations to a minimum and relies primarily on direct observations, the impact of this limitation is reduced.

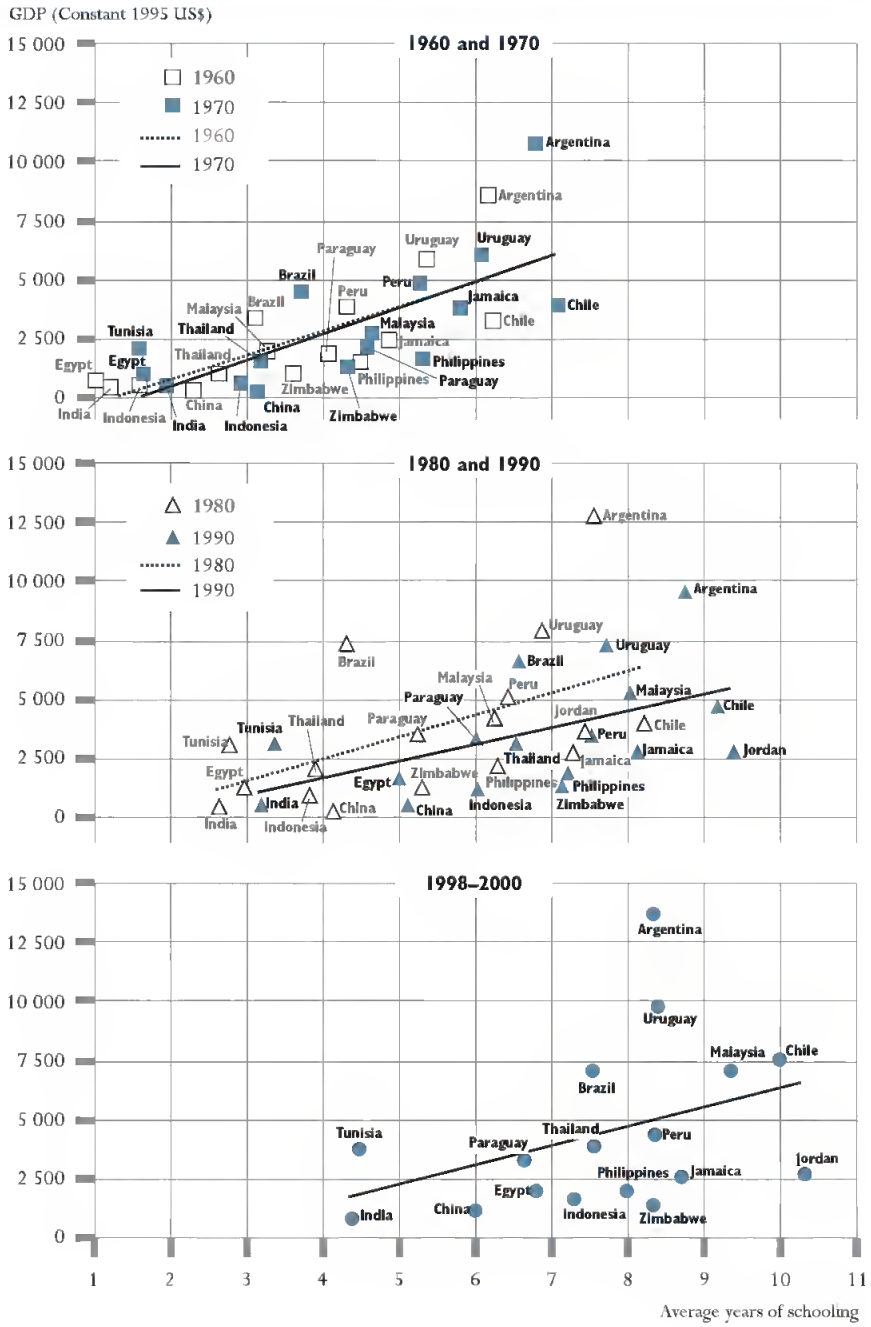
The data set on stocks of human capital has been computed for the beginning of each decade from 1960 to 2000. It is used throughout this chapter to document trends in human capital (see also Table 5 in Annex A4). It also serves as a basis for the econometric study on the growth determinants in WEI countries over the period 1960-1998 (see Figure 1.4).

matter of fact, average years of schooling in the adult population of WEI countries increased steadily from 3.4 years in 1960 to 7.6 years in 2000. However, the range of human capital availability across WEI countries also increased slightly, from a difference of 5.4 years in 1960 to a difference of 6.0 years in 1990 between the best-performing and lowest-performing countries (see Table 5 in Annex A4).

...and a positive link between increased human capital and GDP per adult.

Aside from progress in human capital availability, Figure 1.2 also suggests a positive association between human capital availability in WEI countries and their level of GDP per working-age adult. It is noteworthy that this upward trend holds for all decades examined and its incline has been fairly stable over time. Outlier patterns suggest outstanding performance by several WEI countries.

Figure 1.2
Years of schooling and GDP per capita in age group 15–64, 1960–2000



Note: Average years of schooling of the working-age population for 2000 are compared with 1998 PPP GDP per capita for data availability reasons.

Note: For country-specific notes, please refer to Table 5 in Annex A4.

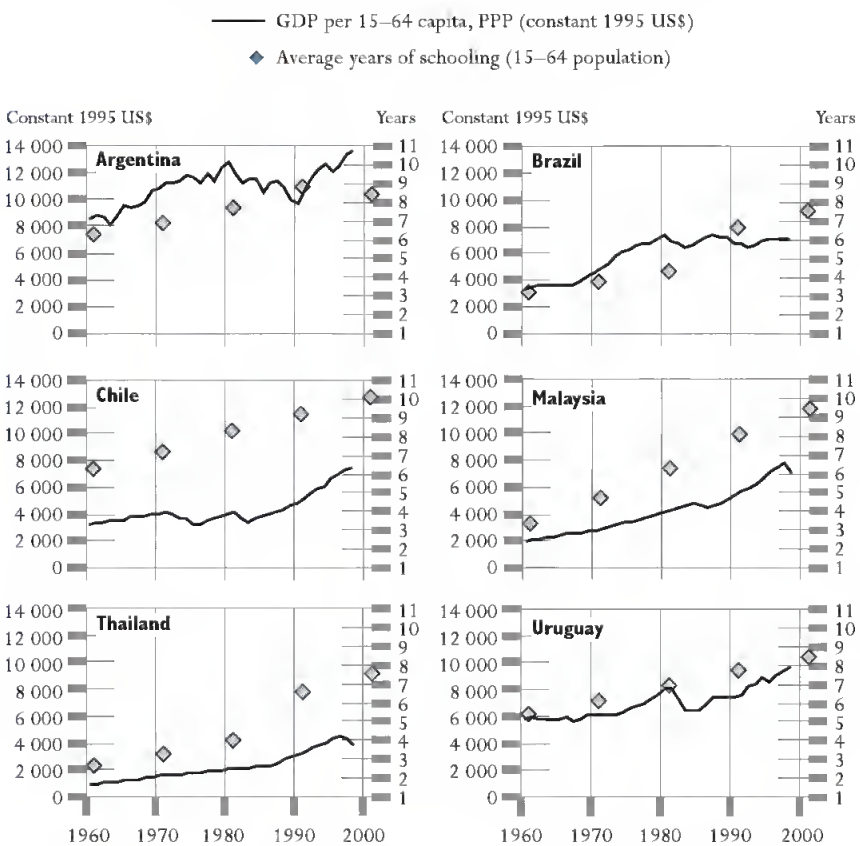
Sources: World Bank, 2000; Cohen and Soto, 2001.

Latin American countries show above-average economic performance given their levels of human capital, while opposite patterns characterize Jamaica, Jordan, the Philippines and Zimbabwe, where relatively high levels of human capital do not seem to have translated into significant progress in GDP per working-age adult. This situation emphasizes the effect of the interaction of other factors in the growth process, among them demography, political stability and the institutional arrangements that frame economic activity.

Latin American countries display above-average economic performance given their levels of human capital, while in Jamaica, Jordan, the Philippines and Zimbabwe, relatively high levels of human capital are associated with more limited economic progress.

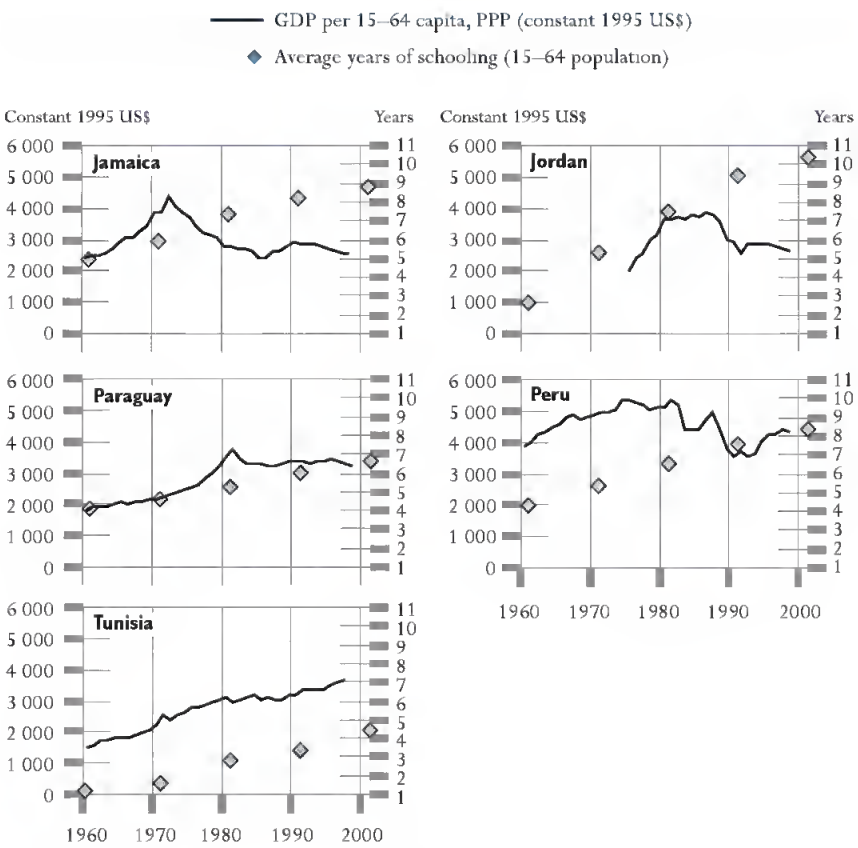
The positive association between human capital and GDP per capita weakened, however, in 1990 and again in 1998–2000, suggesting a slight decrease in the relationship between the two variables. The 1998–2000 observation is no doubt related to the economic recessions that hit several WEI countries and their neighbouring trade partners after the financial crises of 1997–99 – namely Thailand, Indonesia, the Russian Federation, Brazil

Figure 1.3a
Trends in average years of schooling and GDP per capita for the population aged 15–64 , 1960–2000



Note: For country-specific notes, please refer to Table 5 in Annex A4.
Sources: World Bank, 2000; Cohen and Soto, 2001.

Figure 1.3b
Trends in average years of schooling and GDP per capita
for the population aged 15–64 , 1960–2000



Note: For country-specific notes, please refer to Table 5 in Annex A4.
Sources: World Bank, 2000; Cohen and Soto, 2001.

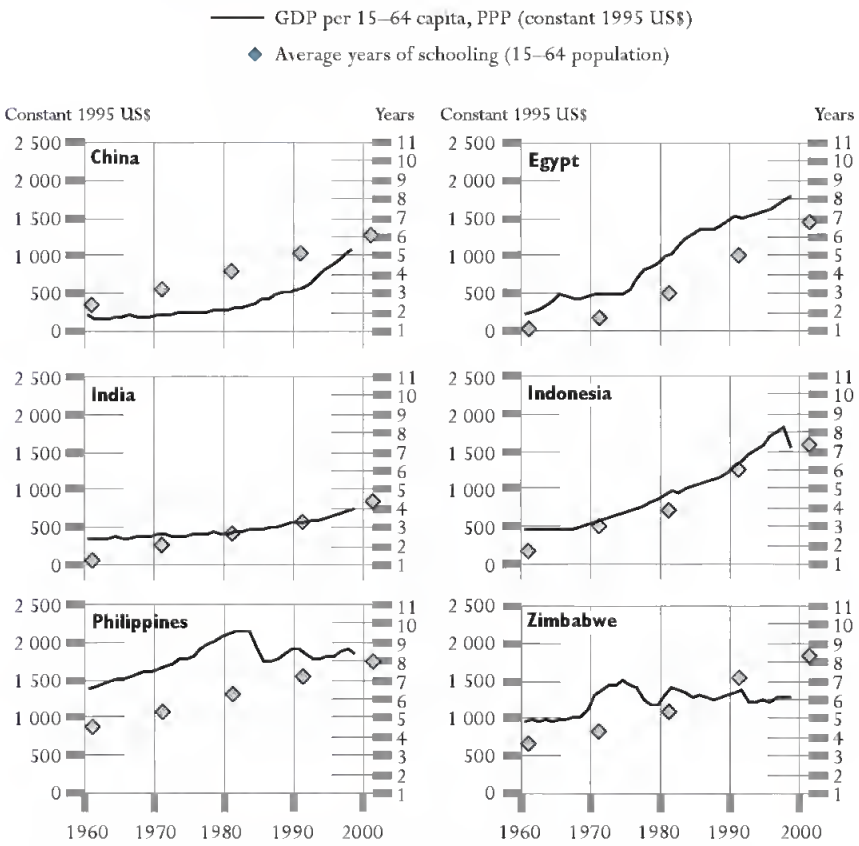
and Argentina. However, explanations for the weaker links of 1990 must be sought elsewhere, especially in country-specific economic downturns.

It takes many years to build human capital nationally, so the sooner investments in education are made, the better.

Figure 1.3 highlights country-specific trends in output per worker and average educational attainment. It underscores the progress in educational trends achieved by WEI countries since all countries but one have experienced a continued increase in years of schooling among the workforce. This overall increase conceals disparities in terms of both levels of educational attainment reached and progress achieved. Human capital accumulation is a slow process: over the past 40 years WEI countries have increased the average years of schooling of their workforce by 2.2 years – to 7.7 years (see Table 5 in Annex A4).

The greatest progress has been achieved in Jordan, Egypt and Malaysia. Improvements have been more moderate in countries that started out with higher levels of educational attainment and had the tougher task of

Figure 1.3c
Trends in average years of schooling and GDP per capita for the population aged 15–64 , 1960–2000



Note: For country-specific notes, please refer to Table 5 in Annex A4.
Sources: World Bank, 2000; Cohen and Soto, 2001.

expanding participation in education at the secondary and tertiary levels, e.g. Argentina, Chile and Uruguay. Progress was also slower in countries that experienced huge demographic pressures over the period, such as India, China and Paraguay.

A number of WEI countries have experienced growing GDP per worker in recent decades, echoing trends in human capital accumulation.

A number of WEI countries enjoyed an almost continuous increase in GDP per worker in recent decades, closely following their human capital accumulation trends (e.g. China, Egypt, India, Indonesia, Malaysia, Thailand and Tunisia). Others experienced more unstable economic performance, making inferences more risky. This is the case for Argentina, Jamaica, Jordan, Peru, the Philippines, Uruguay, Zimbabwe and, to a lesser extent, Brazil, Chile and Paraguay. Argentina, Brazil, Jordan and Peru were hit by economic recessions in 1990, providing a possible explanation for the decreased association between human capital and GDP per worker observed at that time (see Figure 1.2).

Trend analyses shed light upon national experiences but do little to identify common patterns among WEI countries. This is where a systematic econometric analysis can bring added value. Thus, the OECD empirical growth study was replicated for WEI countries to explore the determinants of their growth performance. The study focuses on the role of education and human capital, and on obtaining results that permit comparisons with OECD results. Special effort was made to use a human capital data set similar to that of the OECD study (see Box 1.1). The methodology also closely follows that of the OECD study in terms of explanatory variables, estimation technique and period studied (see Box 1.2).

Box 1.2

Methodology of the WEI growth study

The study of WEI economic growth performance uses the Pooled Mean Group estimator to estimate growth regressions over the period 1960–1998. This is a deliberate effort to closely replicate the OECD study methodology and allow comparisons with OECD growth patterns (see Bassanini and Scarpetta, 2001 for details on the methodology). Similarly, variables used are the same as in the OECD study, subject to data availability, with two exceptions noted below.

The *dependent variable* is the growth in real GDP per head of population aged 15–64, expressed in 1995 constant US dollars. The use of GDP per working-age population avoids problems related to differences in demographic structures. Indeed, WEI countries are characterized by a strong heterogeneity in their demographic patterns (see Table 2 in Annex A4).

The explanatory variables used in the regressions are the following:

- *Convergence* Lagged real GDP per head of population aged 15–64 expressed in 1995 constant US dollars.
- *Investment* Due to data availability, the ratio of gross domestic fixed investment to GDP is used as a proxy for the propensity to accumulate physical capital. The OECD study used the ratio of real private non-residential fixed capital formation to real private GDP.
- *Population growth* measures the growth in the population aged 15–64.
- *Variability of inflation* uses, as a proxy, the standard deviation of the rate of growth in the private consumption price deflator, estimated over a four-year period.
- *Stock of human capital* uses, as a proxy, the average number of years of schooling in the population aged 15–64.
- *Indicator of the exposure to foreign trade* uses, as a proxy, the ratio of exports plus imports to GDP. The OECD study used a weighted average of export intensity and import penetration adjusted for country size.
- *Indicator of government size and financing* uses, as a proxy, government consumption as a percentage of GDP. This variable is generally highly correlated with the tax and non-tax government receipts.

All data on GDP, investment, population, inflation, exports, imports and government consumption are drawn from the *World Development Indicators* (World Bank, 2000). Human capital data are interpolated from 10-year observations from Cohen and Soto (2001).

Econometric evidence suggests that investment and human capital have been the driving forces of economic performance in WEI countries...

The results of the WEI growth study point to several interesting differences in the growth process of WEI countries in comparison with OECD countries.

First, over past decades investment in physical capital has been far more strongly tied to WEI countries' growth than it was in OECD countries. This pattern can be explained by the relatively more recent industrialization of most WEI economies. Governments invested heavily in public infrastructures in their national development plans in order to create a favourable environment for industrial development, especially in the energy, telecommunications and transport sectors. Table 19 in Annex A4 shows very high levels of central government expenditure on capital investments in the 1970s in WEI countries, 4.6 per cent of GDP on average. Such investments usually have strong spillover effects on economic activity and growth, explaining the strong positive association between investment and observed growth performance. In contrast, the 1980s and 1990s were characterized by decreasing public investments in capital in most WEI countries and a reduced impact of investment on economic growth rates.

By contrast, trade liberalization and exposure were positively correlated with GDP per capita growth in all WEI countries but seem to be less closely associated with growth than in OECD countries. This pattern can be related to the large populations of several WEI countries, most notably Brazil, China, India and Indonesia, a factor that inhibits openness to international trade because the domestic market is so big. The trade structure of many WEI countries may also contribute to this lower impact of trade. Indeed, primary products or lower value-added industrialized goods are over-represented in many WEI countries' exports in comparison to OECD countries, in the context of deteriorating terms of trade in recent decades, explaining the comparatively smaller impact of trade on growth. By contrast, some of the more-industrialized WEI countries that relied more on exports of industrialized goods in their development strategies display a stronger impact of trade exposure on growth. The Argentinian, Malaysian, Thai and Tunisian experiences illustrate this pattern.

... while the role of government intervention is more mixed.

Another striking feature of the WEI growth study is the generally negative association between government size – approximated by central government expenditure – and economic performance in all WEI countries. This pattern was found in only a few OECD countries.

That is not to say that government intervention systematically impairs economic performance. The earlier discussion on infrastructure investments illustrates otherwise, as does the apparently strong link between human capital and enhanced economic performance in WEI countries where education is typically heavily funded from the public purse.

The fact that WEI countries display a strong negative correlation between central government expenditure and economic growth rates over the past 30 years suggests that the share of public spending in GDP may have a negative impact on growth directly but a positive impact indirectly through spending on education or infrastructure investments. This apparent contradiction raises questions about the ways and destinations of government intervention and the role of institutional arrangements for economic performance.

Explanations for the negative impact of government spending can be sought in the nature and economic efficiency of public spending (see Table 19 in Annex A4). An analysis of central government spending by destination indicates that, among WEI countries which displayed a stronger negative impact of government spending on growth, several are characterized by above-average levels of military expenditure (Chile, Egypt, Zimbabwe and Malaysia to a lesser extent) or comparatively high levels of debt service (Argentina, Jamaica, Philippines, Tunisia, Uruguay and Chile to a lesser extent). These types of expenditure impose a heavy burden on government finance while having a very limited impact on economic activity.

By contrast, patterns of government intervention for OECD countries have neither such a strong emphasis on military expenditure nor such high levels of debt service. The differences between WEI and OECD countries in the nature and destination of government intervention can provide potential explanations for the observed negative correlation of government spending and economic growth in the WEI countries.

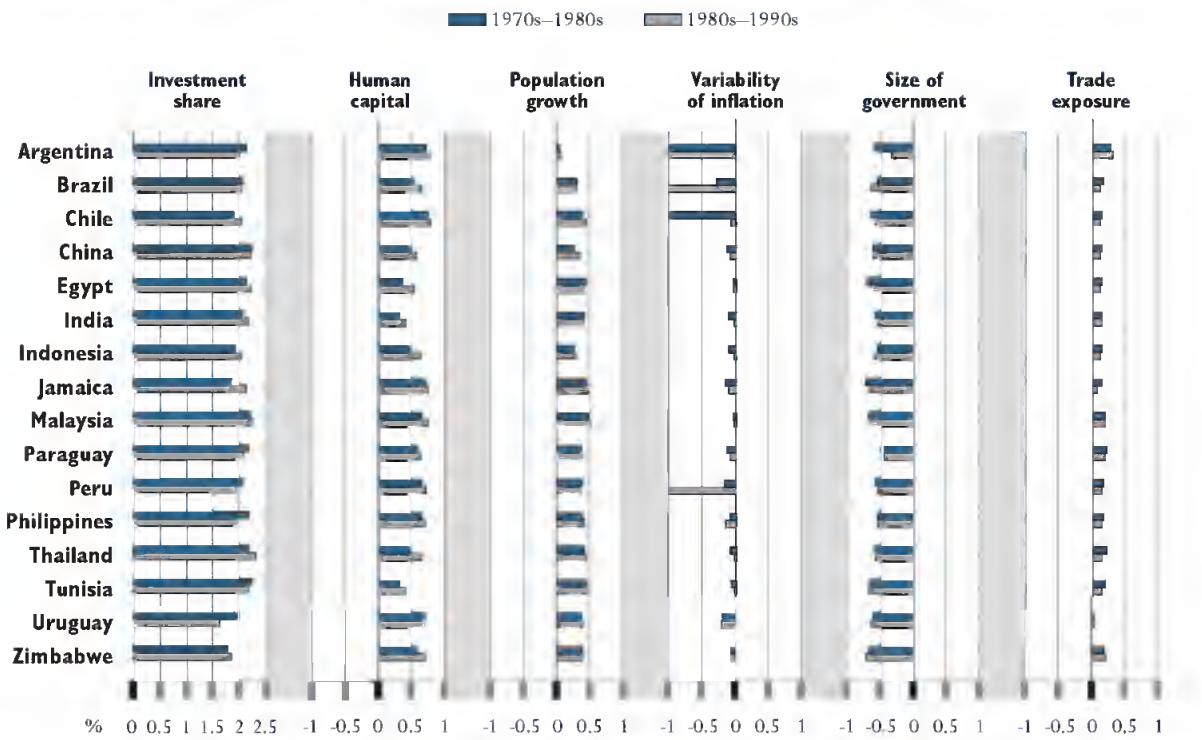
Other factors studied in relation with the growth patterns of WEI countries include the volatility of inflation (which also seems to have strongly impaired the economic performance of Argentina, Brazil and Chile in the 1980s and Peru more recently) and the growth in the working-age population which fostered the growth of GDP per worker in all WEI countries.

Human capital has a stronger positive impact on growth in WEI countries than in OECD countries.

The WEI study confirms a positive association between human capital availability and economic growth, even greater than the impact observed in OECD countries. This magnitude suggests that, on average, improvements in human capital may have accounted for about half a percentage point in the annual growth rates of almost all WEI countries in the 1980s and 1990s compared to the previous decades. In the OECD, only Greece, Ireland, Italy and Spain attained similar levels.

The link between human capital and economic growth has been even stronger in Argentina, Chile, Jamaica, Malaysia, Peru, the Philippines and Uruguay over the past two decades and, in the 1990s, for Brazil, Indonesia, Thailand and Zimbabwe. The impact of human capital is comparatively limited in Egypt, India and Tunisia which started the study period with lower levels of

Figure 1.4
Decomposition of changes in annual average growth rates of GDP per capita in WEI countries by explanatory variable, over the periods 1970s–1980s and 1980s–1990s



Source: Ben Abdallah and OECD/EDU-IA, 2002.

educational attainment. This pattern suggests that human capital may play a stronger role in the growth process once it reaches a threshold. In that respect, the strong correlation between schooling and growth performance in Argentina, Chile, Malaysia and Uruguay suggests that high levels of upper secondary and tertiary attainment are important for human capital to translate into steady growth.

Overall, the WEI study results indicate that for every single year the average level of schooling of the adult population is raised there is a corresponding increase of 3.7 per cent in the long-term economic growth rate.

As far as policy implications are concerned, these results provide support for investments in physical and human capital accumulation in WEI countries given the strong returns in macroeconomic performance. In the WEI context, the stronger impact of physical investment on economic performance may make it look like returns on investment would be higher in infrastructure development and other capital accumulation than in education. Such

an interpretation would be misleading, since these results need to be interpreted in the long-term perspective of the process of economic development and growth.

The comparison of OECD and WEI growth patterns suggests that while investment in capital is important at early stages of industrialization, the role of human capital increases with industrial development and eventually takes over.

The comparison of growth patterns between WEI and OECD countries or between WEI countries at different stages of industrialization suggests that while high investment in capital is strongly associated with growth at early stages of industrialization, the role of human capital increases with industrial development and eventually takes over as a strong driver of economic growth. The growth patterns of OECD countries and some WEI countries with high educational attainment (Argentina, Chile, Jamaica, Uruguay) suggest that this shift in growth patterns may occur once countries reach significant levels of upper secondary and tertiary educational attainment.

The WEI and OECD growth analyses underline, however, that many other factors shape the growth process. The results also support associated policies geared towards increasing the returns to trade exposure, keeping inflation variability at low levels and ensuring that government intervention is directed towards productive uses such as education. As a result, human capital accumulation alone may be insufficient to ensure long-term sustained growth if the institutional arrangements, political context or other major prerequisites for economic growth are not present.

Outcomes of education for individuals

Education has a positive effect on a number of non-economic social outcomes that improve the well-being of societies.

The above results offer strong support for human capital accumulation as a way to enhance economic performance. Education also has a positive effect on a number of non-economic social outcomes that improve the well-being of a society.

Education, especially the education of girls and women, has a strong downward impact on fertility rates, helping to relieve demographic pressures. Indeed, WEI progress on human capital accumulation in the past four decades has been accompanied by a corresponding shift in demographic patterns. Compared to 1990, populations aged 5–14 have already started declining in Brazil, Jamaica, the Russian Federation, Thailand and Tunisia, and have stabilized in Argentina, Indonesia and Uruguay (see Table 2 and Figure 1.16). Changes in fertility rates can, however, take time to translate into population trends as patterns in Chile, China, Egypt and India suggest.

The education of girls and women also translates into lower child mortality rates and better family health because good health practices, such as vaccination campaigns, are easier to publicize and implement in the population.

Lastly, it has been argued that investment in education contributes to lower crime, greater social cohesion and more informed and effective citizens.

Empirical evidence of these effects is difficult to measure but it is clear that education can improve social well-being in more ways than simply economic performance.

From the perspective of the individual, there is ample evidence that investing in education yields economic benefits. Therefore, equitable provision of education services can help alleviate inequality and poverty in society as a whole. The discussion below focuses on these individual outcomes of education.

Aside from cultural aspirations and personal development, the main incentive to acquire education for individuals lies in its multiple economic benefits, especially those that come with higher education. From the economic perspective, individuals are thought to acquire education because the benefits outweigh the costs, including direct costs such as tuition fees and indirect costs such as earnings forfeited while attending school.

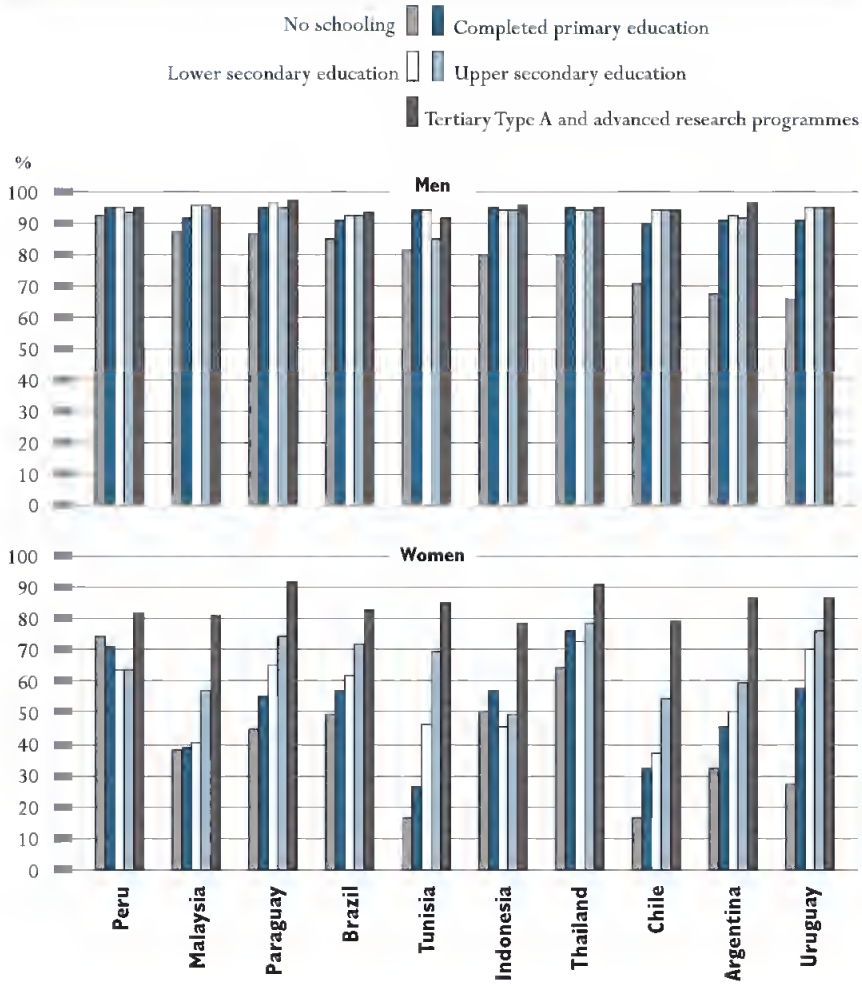
The chief economic outcomes of education for individuals observed in OECD countries are an increased likelihood to participate in the labour market, better performance in the labour market in terms of employability and higher earnings. It is assumed that these benefits usually increase with level of education, especially at post-compulsory levels. Besides, education also has longer-term dynastic effects due to the impact of parental education on their children's participation in education, educational achievements and eventual labour-market outcomes.

Educational attainment has different impacts for the labour force participation of women and men.

In WEI countries, evidence indeed suggests that rates of participation in the labour market in all countries increase with the level of education attained by individuals (see Figure 1.5). It is worth noting that labour market participation patterns are different between women and men. For men, the key threshold for increased participation appears to be completion of primary education. Participation rates increase only marginally with higher levels of attainment, while men with no schooling are far less likely to enter the labour market as, for example, in Uruguay, Chile and Argentina where unemployment rates for males without schooling are the highest among WEI countries, at 6.8, 7.9 and 18.3 per cent respectively (see Table 7 in Annex A4).

For women, education has a strong influence on participation patterns throughout the educational attainment continuum compared to the participation patterns of men. This effect is most evident in Tunisia and Chile where labour market participation rates increase from 16.1 to 85.1 per cent and from 16.2 to 79.6 per cent respectively between women with no schooling and those with tertiary qualification. However, tertiary level attainment appears to be a threshold in most countries, yielding a significant increase in participation rates. Indeed, women with tertiary education show patterns of labour market participation similar to those of their male peers in most WEI countries.

Figure 1.5
Labour force participation rates by gender and educational attainment, 1999



Note: For country-specific notes, please refer to Table 6 in Annex A4.
Source: OECD/UNESCO WEI.

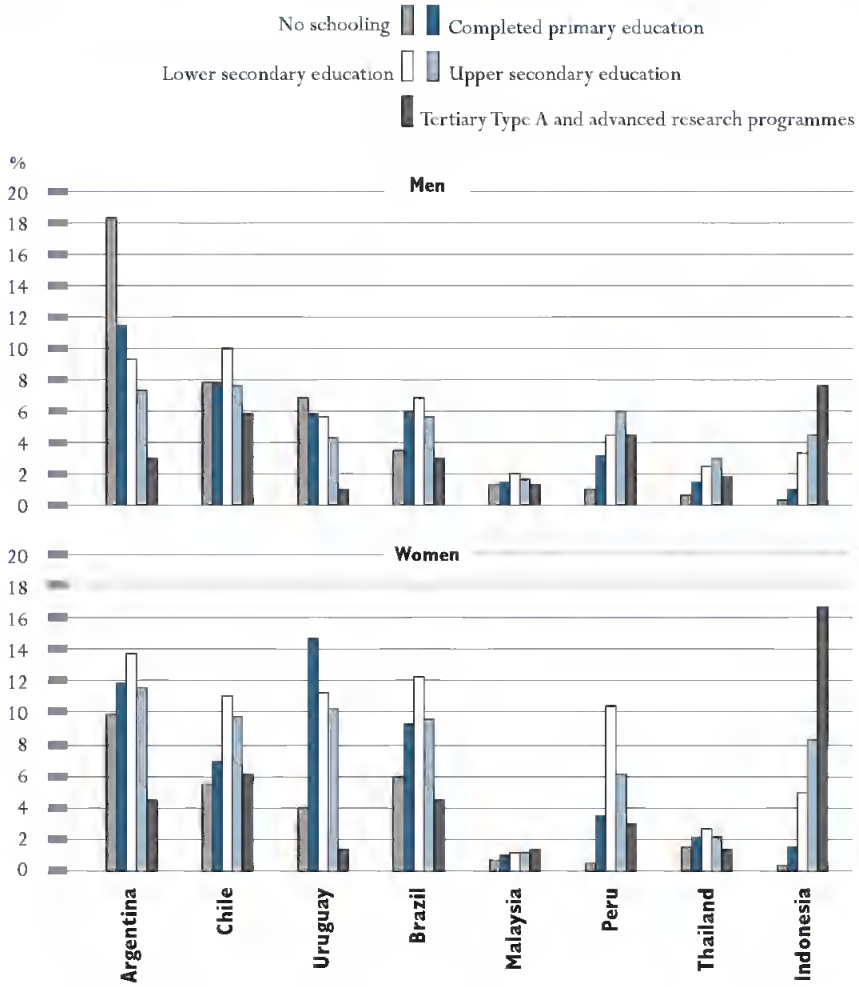
Meanwhile participation rates for women with no schooling are only 20 to 50 per cent those of men with similar attainment in Tunisia, Chile, Uruguay, Malaysia and Argentina. The reasons behind lower participation at lower levels of education may lie in higher fertility rates, the influence of traditional cultural values, greater gender discrimination and/or high levels of unemployment. In Peru and Thailand educational attainment for women has a lesser impact on their labour force participation rates than in other WEI countries, but the impact is still greater than it is for men.

Figure 1.6 shows that unemployment patterns in WEI countries differ slightly from those in OECD countries. Surprisingly, with the exception of men in Uruguay, Chile and Argentina noted earlier, the lower employability of individuals with no schooling is not supported by WEI data. On the contrary, individuals with no schooling record the lowest unemployment rates in most WEI countries, for men and women alike.

Most WEI countries record lower rates of unemployment among those with higher levels of education. However, there are exceptions such as Peru and Indonesia.

In the cases of Peru and Indonesia, unemployment rates actually *increase* with the level of education attained, suggesting a possible mismatch between the output of the educational system at higher levels and the needs of the labour market. Another explanation may lie in a dual labour market, where the

Figure 1.6
Unemployment rates by gender and educational attainment, 1999



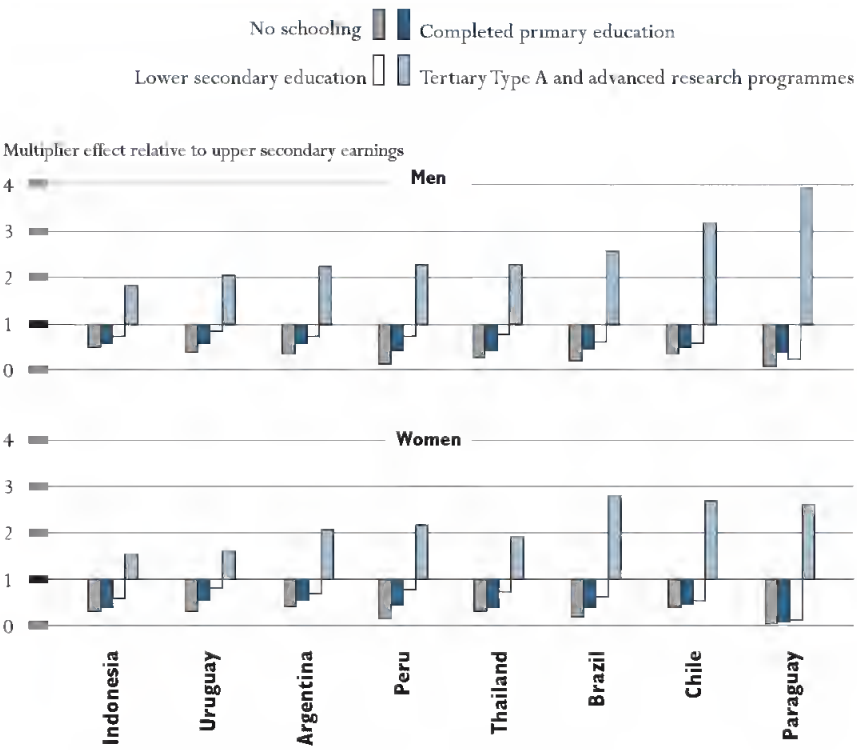
Note: For country specific notes, please refer to Table 7 in Annex A4.
Source: OECD/UNESCO WEI.

incentive structure leads individuals with education to wait in unemployment until they find a 'good' job, such as in the public or modern sectors of the economy, while individuals with no schooling engage in the informal sector and are thus excluded from unemployment statistics.

Despite the employment characteristics of individuals with little or no schooling, most WEI countries *do* record decreasing rates of unemployment between individuals with lower-secondary educational attainment and those with higher levels of education. In that respect, the education premium is highest in Argentina, Uruguay and Brazil and higher for women than men in general (see Table 7 in Annex A4).

Finally, Figure 1.7 provides an indication of the average returns to education in terms of individual incomes. According to labour force and household surveys, education unambiguously translates into higher average earnings from work. Figure 1.7 presents the income differentials between individuals with different educational attainment, with upper secondary attainment as the benchmark.

Figure 1.7
Earnings differentials by level of educational attainment, population aged 25–64, 1999



Note: For country specific notes, please refer to Table 8 in Annex A4.
Source: OECD/UNESCO WEI.

The education wage premium can be observed in all WEI countries, for both men and women.

The education wage premium can be observed in all countries and for both women and men. One noteworthy pattern is that, while earnings increase with each additional level of education in most countries, upper secondary and especially tertiary educational attainment constitute a dramatic threshold in Brazil, Chile and Paraguay.

For men, the earnings advantage of tertiary education ranges from increases of 82 per cent in Indonesia to almost 300 per cent in Paraguay. Tertiary education premiums are less dramatic for women, ranging from an increase of 55 per cent in Indonesia to 180 per cent in Brazil. Conversely, the earnings disadvantage of having no schooling is highest in Paraguay and Peru for both women and men: women with no schooling have earnings 97 and 84 per cent, respectively, below those of women with upper secondary education; and men have earnings 93 and 88 per cent below (see Table 8 in Annex A4). Overall, WEI countries in Latin America display the largest variations in income by educational attainment, while WEI countries in Asia reflect less income inequality as educational attainment rises.

Aggregate data from labour force surveys provide an indication of the average impact of education on incomes, but they do not reflect the individual characteristics that also determine earnings levels. An individual's level of earnings results from characteristics such as gender, age, marital status, formal education, work experience, trade unionization, social or racial background, in some instances, and unobservable abilities. In addition, the local labour market situation (unemployment rate or occupation shortages) and the characteristics of jobs (region, activity, sector) also affect wages.

Systematic analyses based on individual data can help distinguish the respective roles of these determinants in earnings, using records of individuals' earnings and their characteristics to make statistical inference. Two such studies are presented in Box 1.3, estimating private returns on education in two Latin American WEI countries.

2 CURRENT LEVELS AND FUTURE TRENDS FOR HUMAN CAPITAL AND EDUCATIONAL INVESTMENT

Given the benefits that education delivers to individuals and society as a whole, it is useful to review past progress achieved by WEI countries in terms of educational participation and attainment before turning to the future and the challenges ahead.

Human capital availability in WEI countries – achievements and prospects

Most regions of the world have made progress on access to and participation in education over the past few decades.

Significant progress in access to and participation in education has been achieved over the past 35 years in most regions of the world, including WEI countries, as evidenced by trends in literacy and enrolment rates presented in Figure 1.8.

Box 1.3

Case studies of individual returns from education

In these studies, the earnings premium of education is deducted from micro-econometric estimations of earnings functions. The educational level of individuals is used as an explanatory variable of their income, next to other individual characteristics of workers or work-specific determinants. These micro-level studies make it possible to derive the individual returns from each additional year of schooling.

Chile

Private returns on investment in education were estimated on the basis of the 1998 International Adult Literacy Survey data set (Contreras, Bravo and Medrano, 1999). In this study, the determinants of earnings considered include the age, level of education, employment situation and observed experience of workers as well as dummy variables to capture the effects of primary, secondary and tertiary education. The results indicate that individual returns to education were 9, 7 and 19 per cent respectively. This suggests that once all other determinants of income are taken into account and controlled for, each additional year of schooling has a strong positive impact on earnings.

A previous study based on 1994 data from the national household survey provides similar estimates for the returns to tertiary education, at nearly 18 per cent, but slightly higher returns to general upper secondary education at 12 per cent (Arellano and Braun, 1999).

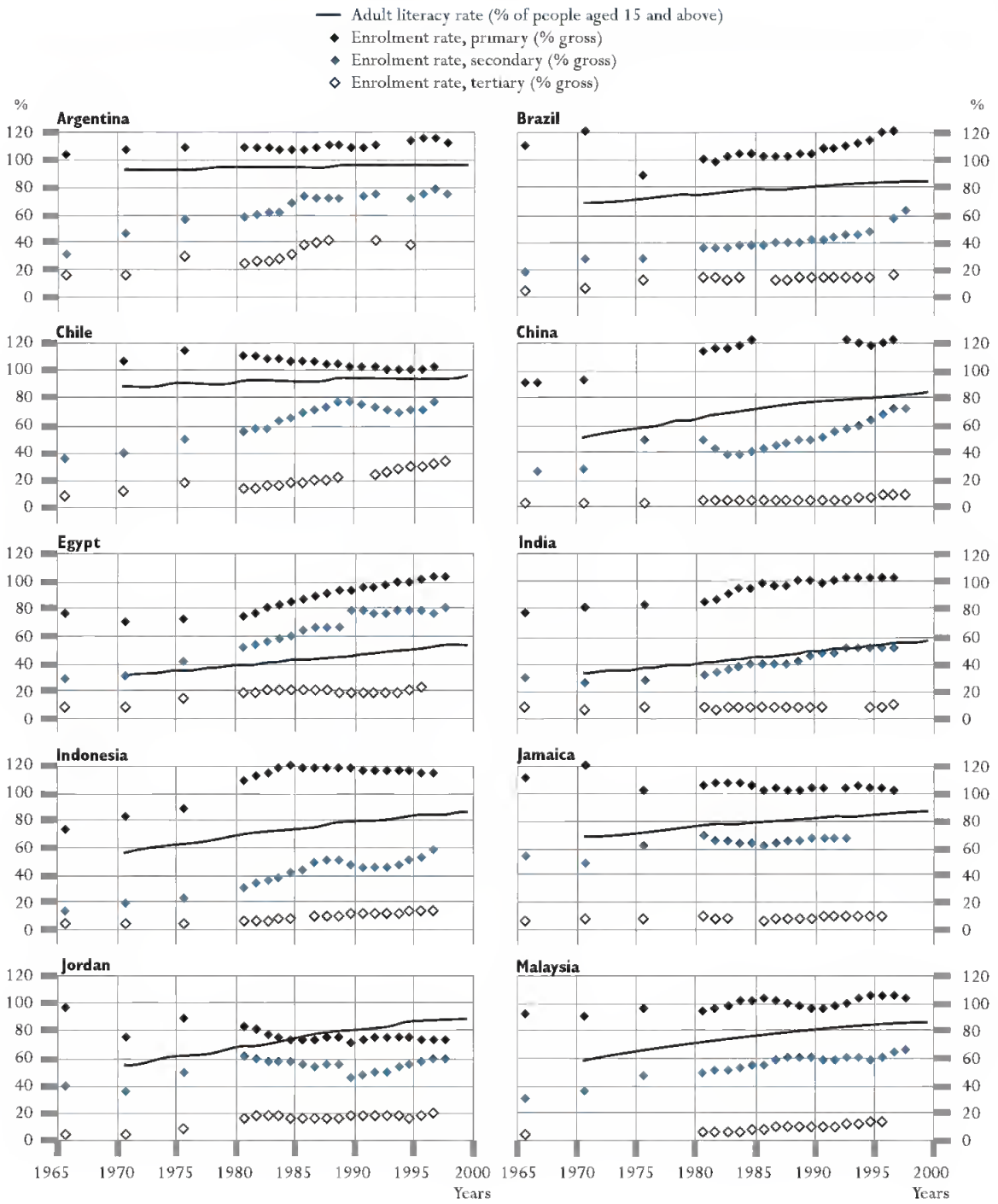
Peru

Private returns on investment in education were estimated in 1991 for women and men in different regions of the country based on Living Standards Measurement Study data (Rodríguez, 1993). The rates of return for men living in the capital Lima were estimated at 29.4 per cent for primary education, 13.7 per cent for secondary and 9.5 per cent for tertiary. This study also points to several interesting results. Firstly, rates of return tend to be higher for men than women with primary education, roughly the same for individuals with secondary education and higher for women at the tertiary level. Rates of return are higher in rural areas than in either urban areas or the capital city for both women and men, and for all levels of educational attainment examined. The latter pattern may provide empirical support to the hypothesis of a dual labour market.

A more recent study using the same data set estimated the overall private rate of return on education in Peru at 10.4 per cent in 1997 (Saavedra and Maruyama, 1999).

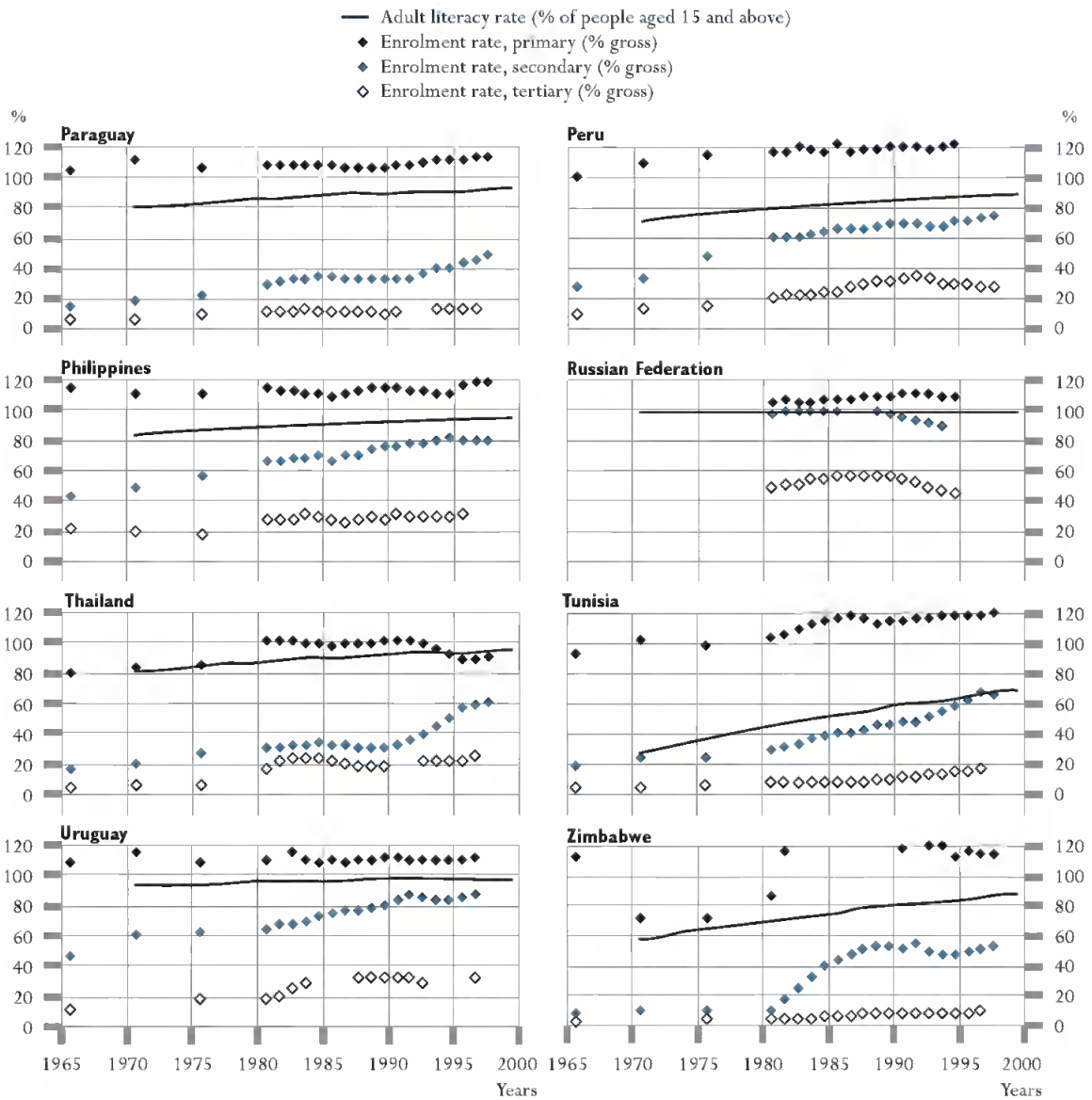
Comparisons with OECD countries are difficult to make due to differences in methodologies, variables and time-frames used. Still, it is interesting to note that, overall, the private returns on schooling in Peru and Chile tend to be slightly above the corresponding OECD averages (Blöndhal et al., 2001). Upper secondary education yields a return of 13.7 per cent for men in Peru compared to the OECD average of 11.4 per cent for men. The picture is less clear for Chile where estimates put returns both at 7 per cent (the lower range of OECD countries) and 12.2 per cent (higher than the OECD average). Conversely, returns on tertiary education in Peru are estimated at 9.5 per cent for men, higher than several OECD countries but still below the OECD average. By contrast, returns to higher education in Chile are extremely high at 19 per cent, far above the OECD average of 11.8 per cent and even above the highest OECD country return of 14.9 per cent observed in the United States.

Figure 1.8a
Trends in enrolment and literacy rates, 1965–1999



Source: World Bank, 2000.

Figure 1.8b
Trends in enrolment and literacy rates, 1965–1999



Source: World Bank, 2000.

Some WEI countries, such as Argentina, Chile and Uruguay, reached near-universal adult literacy rates in the mid-1960s and have since continued to take an increasing proportion of their youth population into secondary and tertiary education. Similar trends can be observed, although with more limited progress for tertiary participation rates, in Brazil, Jamaica and Paraguay.

The Russian Federation and Jordan stand out for their above-average performances in the mid-1960s and early 1980s respectively with

comparatively high levels of participation in primary and secondary education, and even tertiary for the Russian Federation. As a matter of fact, the latter was the only WEI country to achieve nearly universal participation rates in both primary and secondary education in 1980. Both countries have since experienced unusual trends with declines in enrolment rates associated in the Russian Federation with the transition to a market economy and in Jordan with massive waves of immigrants into the country.

Another subset of countries, comprising Indonesia, Malaysia, Peru, the Philippines, Thailand and Zimbabwe, started from slightly lower levels of adult literacy or primary enrolment rates, but achieved considerable progress over the past 35 years. They all reached nearly universal participation rates at the primary level and dramatically increased participation in secondary and tertiary education. Progress was initially mainly confined to growth in secondary enrolment rates, but tertiary enrolment rates began to take off in the mid-1980s in Peru and Malaysia, and to a lesser extent in Indonesia, Jamaica and Zimbabwe.

Other WEI countries, starting with low levels of literacy among the adult population have made rapid progress in education in recent decades, achieving universal enrolment in primary education and significantly increasing secondary enrolment rates. However, in spite of these achievements, they will need more time to reach nearly universal literacy rates due to the slow pace at which younger literate cohorts are replacing older less-educated ones. This is the case in China and Tunisia.

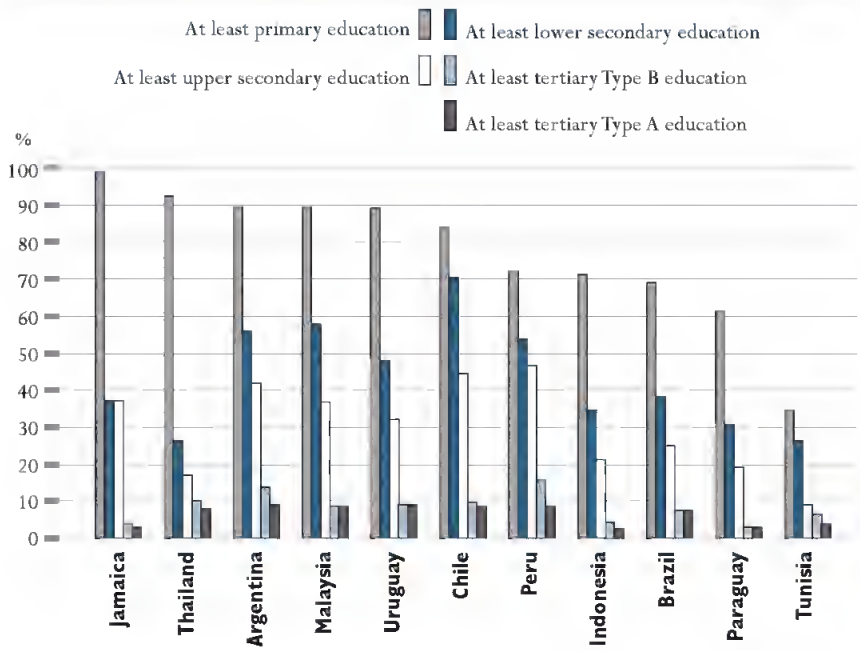
Lastly, Egypt and India have just recently met the challenge of universal enrolment in primary education. They do perform relatively well, compared to historical trends in other WEI countries, when it comes to expanding participation in secondary education.

All WEI countries have made impressive progress on education but there are still striking differences in the educational attainment of their workforces.

Despite the impressive past achievements of all WEI countries, current patterns of educational attainment in the workforces of WEI countries reveal striking differences. Figure 1.9 indicates that primary education is generalized to more than 80 per cent of the working-age population in Argentina, Chile, Jamaica, Malaysia, Thailand and Uruguay, but it barely reaches 35 per cent of the workforce in Tunisia. In Brazil, Indonesia, Paraguay and Peru, 60–70 per cent of the population aged 25–64 have at least primary education.

Secondary education is much less common, ranging from about 25 per cent of the working-age population in Thailand and Tunisia to 70 per cent in Chile for lower secondary education, and from less than 10 per cent in Tunisia to 46 per cent in Peru for upper secondary education. The drop

Figure 1.9
Distribution of the population aged 25–64 by level of education, 1999



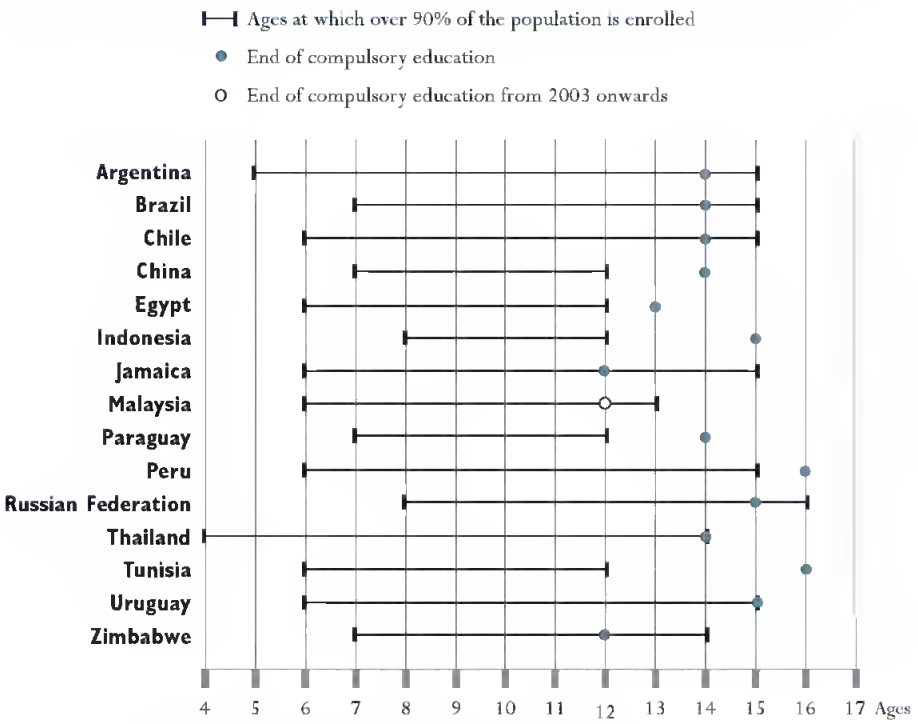
Note: For country-specific notes, please refer to Table 3 in Annex A4.
Source: OECD/UNESCO WEI.

in educational attainment at the secondary level is especially striking in Indonesia, Jamaica, Thailand and Uruguay, and to a lesser extent in Argentina, Brazil, Malaysia and Paraguay. Chile, Peru and Tunisia display secondary educational attainment closer to their primary achievements. Lastly, tertiary education attainment is the exception in the labour forces of Indonesia, Jamaica, Paraguay and Tunisia, while it is shared by 10 per cent or more of the working-age population in Argentina, Chile, Peru and Thailand.

Despite a general effort to enrol students into secondary education, human capital varies noticeably among WEI countries.

In this context, the current availability of human capital differs noticeably among WEI countries, despite a general effort to enrol current students until lower secondary education in most of them. Figure 1.10 illustrates the ambition of national education policy goals with compulsory schooling ages approaching OECD benchmarks (see Table 21). Among WEI countries, seven nations enrol more than 90 per cent of their youth population up to age 15, namely Argentina, Brazil, Chile, Jamaica, Peru, the Russian Federation (up to age 16) and Uruguay. These high current enrolment rates will allow for significant progress in human capital availability as young cohorts join the workforce.

Figure 1.10
Age range where over 90% of the population is enrolled and ending age of compulsory schooling, 2000



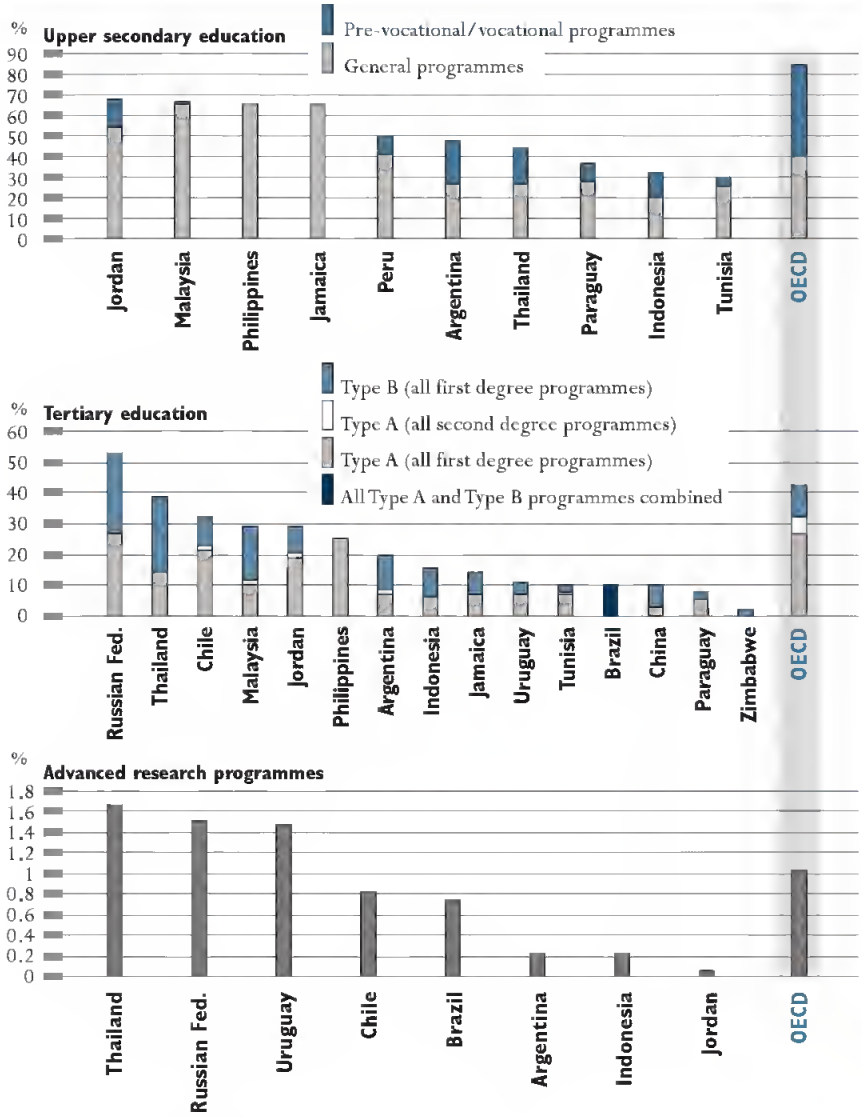
Note: For country specific notes, please refer to Table 21 in Annex A4.
Source: OECD/UNESCO WEI.

Increasing the availability of human capital depends critically on increasing completion of education.

Access to education, however, provides only part of the picture since the translation of increased access into increased availability of human capital depends critically on *actual* completion of education. In this regard, WEI countries are characterized by different graduation rates which suggests they will also have different rates of production when it comes to future human capital (see Figure 1.11).

At the upper secondary level, graduation rates in general programmes range from 19 per cent of the population of typical graduation age in Indonesia to more than 65 per cent in Jamaica, Malaysia and the Philippines. The latter performances are all the more striking when compared to the OECD average of 40 per cent. In fact, one characteristic of WEI countries when compared to the OECD is the relatively low proportion of vocational graduates (see Table 26 in Annex A4). Argentina, Thailand and to a lesser extent Indonesia and Jordan are exceptions though and display vocational graduation rates between 13 per cent in Indonesia and Jordan, and 21 per cent in Argentina (see Table 26 in Annex A4).

Figure 1.11
Graduation rates, 2000



Note: For country-specific notes, please refer to Tables 26 and 29 in Annex A4.
Source: OECD/UNESCO WEI.

The Russian Federation, Chile, Malaysia and Thailand display high tertiary graduation rates.

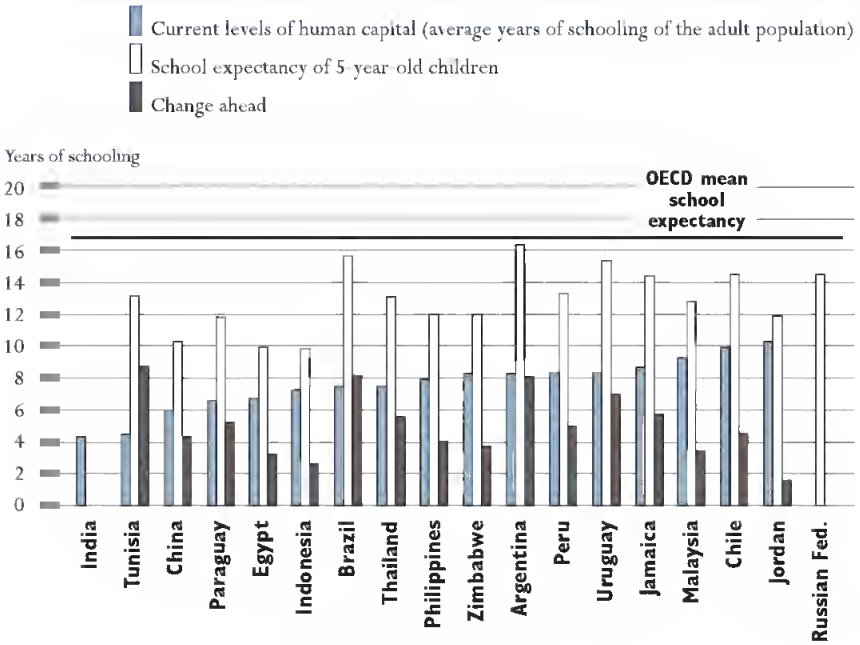
Another noteworthy point is the diversity of experiences as far as tertiary education is concerned. Russian graduation rates reach the OECD benchmark for Type A programmes, around 27 per cent of the population at typical age. However, the Russian Federation significantly outperforms the OECD average when taking into account tertiary Type B programmes with another 25 per cent of the population at typical age graduating from these programmes. Other WEI countries that display high tertiary graduation

rates are Chile at 32 per cent, Malaysia at 29 per cent and Thailand at 39 per cent. By contrast, Brazil, China, Paraguay, Tunisia and Uruguay see barely 10 per cent of the corresponding cohorts graduate from tertiary education (see Table 29 in Annex A4).

As far as advanced research programmes are concerned, Thailand, the Russian Federation and Uruguay are the leading WEI countries and outperform OECD standards. Other WEI countries lag far behind with the exception of Brazil and Chile which have a graduation rate of about 0.8 per cent for advanced research programmes. Since research and innovation have been critical determinants of economic performance in OECD countries in recent years, the relatively high number of graduates in Thailand, the Russian Federation and Uruguay may increase their ability to reap the benefits of technology transfers in the future.

Lastly, Figure 1.12 puts past WEI achievements in human capital accumulation and the progress ahead for tomorrow's workforce into perspective, given the current school expectancy of WEI countries. The analysis relies on the assumption that the current school expectancy illustrates the target level of human capital that WEI countries are aiming at for their future workforce.

Figure 1.12
Current availability of human capital and progress ahead for the future workforce



Note: For country-specific notes, please refer to Tables 5 and 20 in Annex A4.
Source: OECD/UNESCO WEI.

Given current levels of human capital and future targets, the challenge appears to be greatest in Argentina, Brazil and Uruguay in order to attain an average of more than 15 years of schooling in the adult population, due to school expectancies approaching OECD benchmarks. China, Paraguay and Tunisia face similar challenges, but in contrast to the above Latin American countries, the magnitude of the changes emanates mainly from a low starting-point in terms of human capital. Interestingly, Tunisia combines both a low starting level of human capital and an above-average target of 13.2 years of education (see Table 20 in Annex A4).

Given current levels of human capital and future targets, the challenge ahead appears to be greatest in Argentina, Brazil, Uruguay, China, Paraguay and Tunisia.

By contrast, Jordan, where human capital availability is currently highest among WEI countries, will experience a slight increase in educational attainment of the adult population if school expectancy remains at current levels. In that country, significant increases in participation in education will be necessary to bring about improvements in human capital availability.

Despite the interest of the above comparison, one element must be kept in mind when interpreting Figure 1.12. The translation of school expectancies into actual achievements in human capital critically depends on maintaining – if not improving – current enrolment and graduation patterns over the next decades. This provides WEI countries with a great challenge: maintaining current education participation and completion patterns into the future given country-specific demographic trends in school-age populations and current levels of investment in education. The discussion below aims at assessing the magnitude of this challenge for education finance.

Future achievements in human capital depend on turning – if not improving – current school expectancies into actual enrolment and graduation rates in the years ahead.

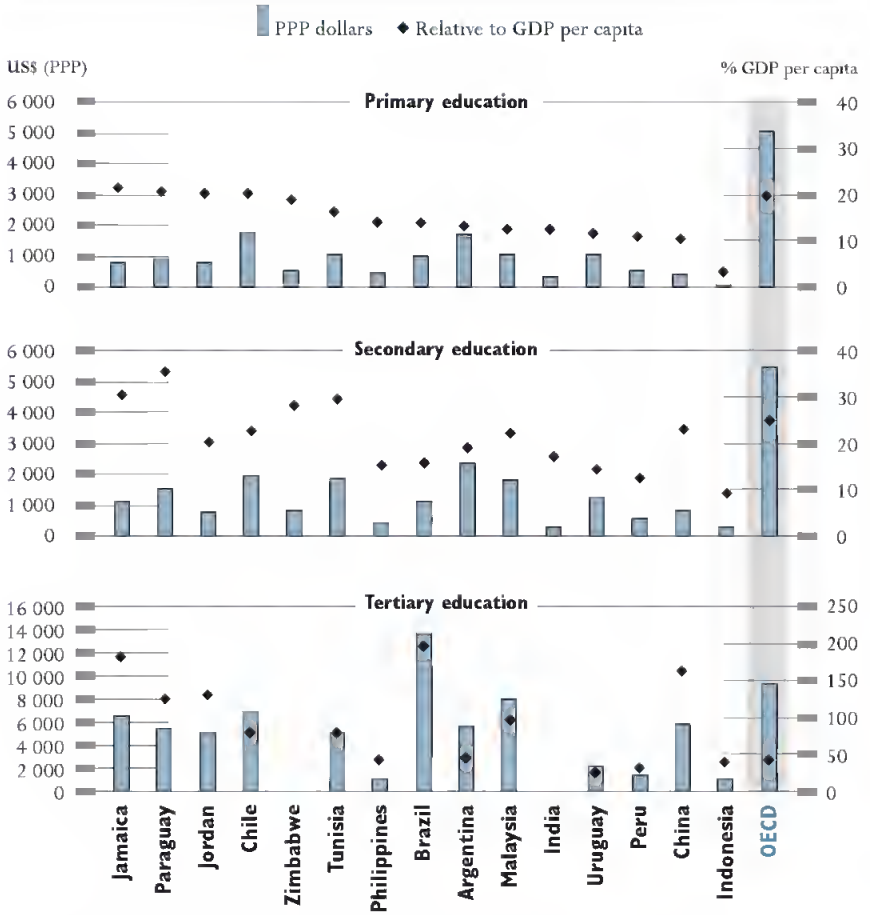
Current levels of investment in education and expected changes as a result of demographic trends and policy goals

There is little doubt that enhancing educational achievements can bring about positive outcomes. However, the progress achieved by WEI countries in educational participation, completion and attainment has a cost, often significant. Also, future prospects for human capital accumulation depend critically on the ability of WEI countries to maintain – or increase – current rates of participation and completion. This section looks at current levels of investment in education across WEI countries in the context of the school-age demographic pressures they face and their national policy goals.

Figure 1.13 provides a basic idea of current levels of investment in education by tabulating the level of expenditure per student at different levels of education.

Not surprisingly, expenditure per student increases with level of education, except in India where expenditure per secondary student is slightly lower than for primary students, and Jordan where expenditure per secondary student is only marginally above the primary level of spending. On average,

Figure 1.13
Expenditure per student, 1999



Note: For country-specific notes, please refer to Tables 9 and 10 in Annex A4.
Source: OECD/UNESCO WEI.

average, unit costs increase by 41 per cent between primary and secondary levels of education, and increase a further 361 per cent between secondary and tertiary levels (see Table 9 in Annex A4). However, the leap between secondary and tertiary varies widely among WEI countries, from a 75 per cent increase in Uruguay to 1,200 per cent in Brazil.

Education services are provided at very different costs across WEI countries, even after adjusting for purchasing power parities and differences in the levels of wealth per capita.

These orders of magnitude underline the heavy financial implications imposed by the enhancement of educational participation and attainment once primary and lower secondary education are universally accessible. They also illustrate the choices policy-makers have to make: whether to provide access to tertiary education for one more Brazilian student or to expand access to 12 students at the secondary level.

Nevertheless, Figure 1.13 also suggests that education services are provided at very different costs across WEI countries, even after adjusting for purchasing power parities and differences in the levels of wealth per capita. This raises the question of whether cost-efficiency gains can be made in expanding education participation.

Disparities in expenditure per student are especially wide in absolute terms. At the primary level, for example, Chile – the highest-spending country – spends in absolute terms more than 20 times as much as Indonesia, the lowest spender, after adjusting for purchasing power differences. The picture changes slightly and the gap decreases when taking into account their relative levels of domestic wealth. The proportion of per-capita wealth that Chile spends on primary education is seven times that of Indonesia. In fact, the high levels of expenditure per student at the primary level observed in Argentina, Chile, Malaysia and Uruguay hide equally high or even higher levels of investment relative to GDP per capita in Jamaica, Jordan, Paraguay, Tunisia and Zimbabwe.

Expenditure per student relative to GDP per capita is more homogenous across countries at the secondary level of education.

Interestingly, international differences in unit costs expressed in terms of GDP per capita are highest at the primary and tertiary levels of education, while secondary education is provided at a much more homogenous cost across countries. The variation across WEI countries in relative levels of investment is characterized by a sevenfold range at the primary level between Indonesia (the lowest spender in relative terms) and Jamaica (the top spender). At the tertiary level, Brazil spends nearly eight times more per student than does Uruguay relative to GDP per capita, while the variation is less than a fourfold range between Indonesia and Paraguay at the secondary level of education.

These differences in relative levels of expenditure per student are also found in aggregate levels of investment in education. While Indonesia spends an equivalent of 1.2 per cent of its GDP on education, Jamaica spends eight times more in relative terms at 9.9 per cent of GDP. On average, WEI countries spend a similar proportion of their GDP on educational institutions as OECD countries – 5.5 per cent. However, the breakdown between public and private sources differs significantly with the private sector contributing the equivalent 1.6 per cent of GDP in WEI countries and only 0.6 per cent in OECD countries (see Table 11 in Annex A4).

Paraguay, Jamaica and Chile display the highest recourse to private funding, while Zimbabwe, Tunisia and Jamaica record the highest level of public spending on education, relative to GDP.

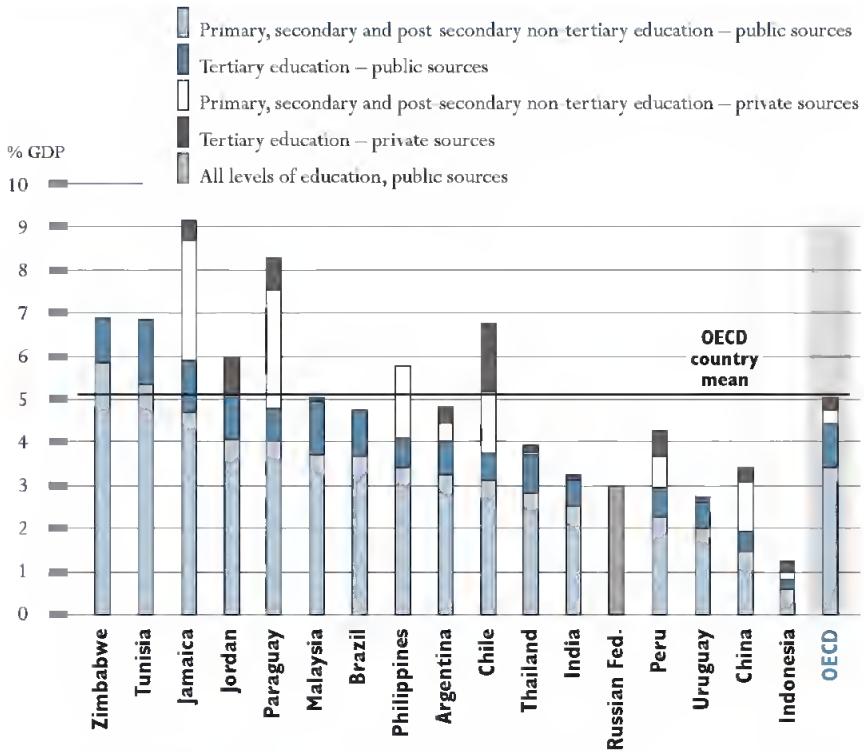
Among WEI countries, Chile, Jamaica and Paraguay are the countries with the highest recourse to private funding of education with 3.1, 3.6 and 3.7 per cent respectively of GDP spent on all levels of education. As far as public spending is concerned, Zimbabwe, Tunisia and Jamaica all spend between 6 and 7 per cent of their GDP on education compared to 2 per cent and less in China and Indonesia.

Figure 1.14 illustrates the breakdown of education expenditure by source of funds and level of education in WEI countries. Expenditure on pre-primary education is excluded because of the wide heterogeneity of participation and funding at this level.

Compared to the OECD average of 5.5 per cent of GDP, seven WEI countries have higher levels of investment in education relative to their level of wealth, namely Jamaica, Paraguay, Zimbabwe, Tunisia, Chile, Jordan and the Philippines. Interestingly, most of these countries either start from comparatively low levels of educational attainment and need to invest heavily to catch up (Tunisia, Paraguay) or are facing strong current or forthcoming demographic pressures (Jordan, Zimbabwe, Paraguay and the Philippines, Chile to a lesser extent) that partly explain their current above-average investment in education.

Patterns of aggregate spending on education are greatly affected by the level of expenditure from private sources. For example, education funding from

Figure 1.14
Education expenditure by source of funds and level of education relative to GDP, 1999



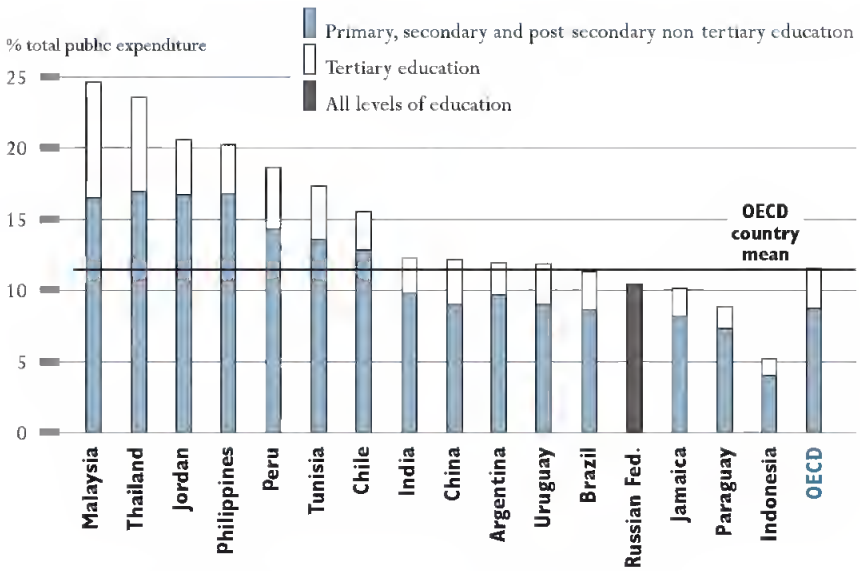
Note: For country-specific notes, please refer to Table 11 in Annex A4.
Source: OECD/UNESCO WEI.

public sources in Argentina and Chile account for similar portions of GDP at around 4.0 per cent, but funding from private sources is vastly different at 0.8 per cent of GDP in Argentina and more than three times that in Chile. This contrast explains why overall education expenditure reaches 6.7 per cent in Chile and only around 4.8 per cent in Argentina. Similar observations can be made for Argentina and the Philippines, or Jordan, Malaysia and Paraguay.

Expenditure on primary to tertiary education represents nearly one quarter of the public budget in Malaysia, and more than 20 per cent of the budget in Thailand, Jordan, and the Philippines.

Lastly, the level of investment in education can be looked at from the perspective of public budgets. Figure 1.14 shows that, with the exception of Jamaica, Paraguay and Chile, where the contribution of the private sector to education finance is significant, education investments come mainly from the public purse in WEI countries. Education thus places a heavy burden on public budgets and, indirectly, on taxpayers. Figure 1.15 emphasizes the importance education is given by national policy-makers in terms of budget allocations. Although some WEI countries spend between 5 and 10 per cent of their public allocations on primary to tertiary education (Indonesia and Paraguay), education represents as high as one quarter of the public budget in Malaysia, double the OECD average of 12.7 per cent. Primary to tertiary education also represents a high proportion of total public expenditure – at more than 20 per cent – in Thailand, Jordan and the Philippines.

Figure 1.15
Public expenditure on education by level of education relative to total public expenditure, 1999



Note: For country-specific notes, please refer to Table 14 in Annex A4.
Source: OECD/UNESCO WEI.

WEI countries spend about the same share of GDP on education as OECD countries do but they face greater demographic demands.

Overall, WEI countries display current levels of investment in education relative to GDP on par with those of OECD countries and slightly higher relative to total public expenditure. For some WEI countries, however, the cost of education is already far higher than the OECD or WEI averages. In this context, the additional demands faced by several WEI countries in terms of demographic trends makes the goal of maintaining current education achievements already challenging, not to mention the considerable task that further improvements in education participation would incur.

Indeed, despite obvious progress already achieved in access to and completion of education, efforts are still required to make access to education universal and meet the goals set at the World Education Forum and the Millennium Summit. While most WEI countries have almost achieved universal access and completion of basic education, education provision to all sections of the youth population is not yet a reality everywhere, especially for girls, students in remote or economically disadvantaged areas, or those belonging to particular ethnic or linguistic minorities.

Progress in access to and participation in secondary and tertiary education is even more uneven across WEI countries. Most countries aim to expand education participation further at these levels – a challenging task given the demographic trends.

WEI countries face a larger school-age population than OECD countries, as much as twice as large in Jordan, Paraguay, India and Zimbabwe at the primary and lower secondary levels.

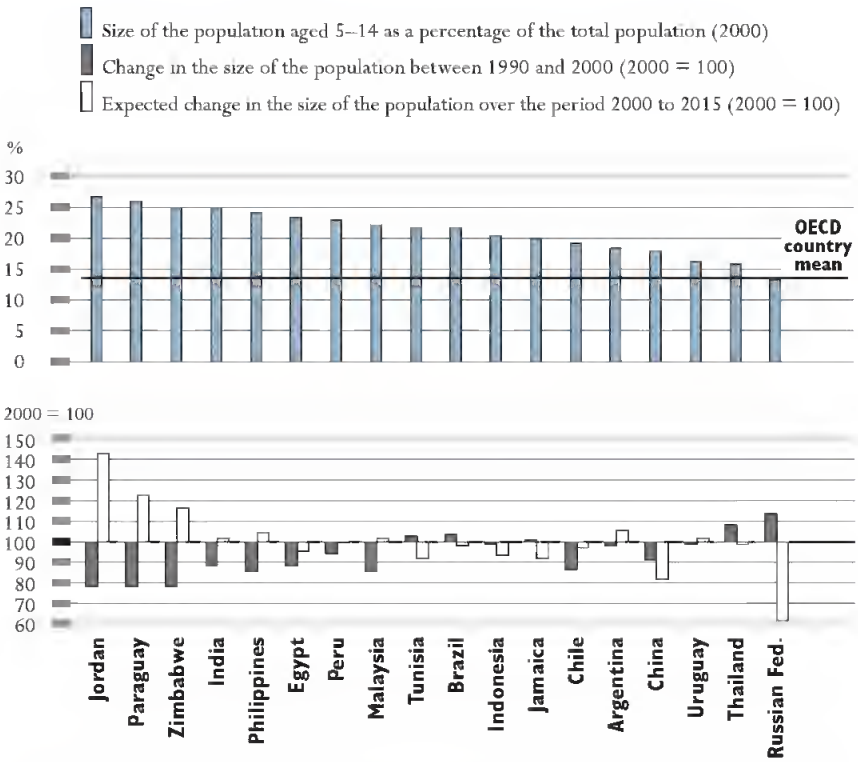
As evidenced in Figure 1.16, all WEI countries have a larger demand for primary and lower secondary education than is the case for OECD countries with an average 21 per cent of the population aged 5–14 compared to 13 per cent in the OECD. The Russian Federation is an exception among WEI countries with demographic patterns similar to those of OECD countries. In the case of Jordan, Paraguay, India and Zimbabwe, the proportion of children aged 5–14 in the total population is actually twice as large as it is in OECD countries, placing an extreme burden on education budgets.

At the upper secondary level of education, only the Russian Federation, Thailand, Brazil, Jamaica and China will see their school-age population decrease by more than 5 per cent over the next 15 years, while Paraguay, Zimbabwe and Jordan face increases above 25 per cent.

A positive note, however, results from the observation that most WEI countries have now completed their demographic transition and will experience stabilization, and even decreases for half of them, in their populations aged 5–14 over the next 15 years (see Table 2 in Annex A4).

The picture is quite different at the upper secondary and tertiary levels due to time lags in the demographic changes, as Figure 1.17 presents. At the upper secondary level, only the Russian Federation, Thailand, Brazil, Jamaica and China will see their populations aged 15–19 decrease by more than 5 per cent in the next 15 years. By contrast, Chile, India, Malaysia and the Philippines will experience increases in this population of more than 10 per cent and Paraguay, Zimbabwe and Jordan increases of more than 25 per cent. At the tertiary level, population increases will be even greater, ranging from 2 per cent in Uruguay to more than 50 per cent in Paraguay and Zimbabwe.

Figure 1.16
Relative size and expected changes in the population at the age of primary and lower secondary education, 2000



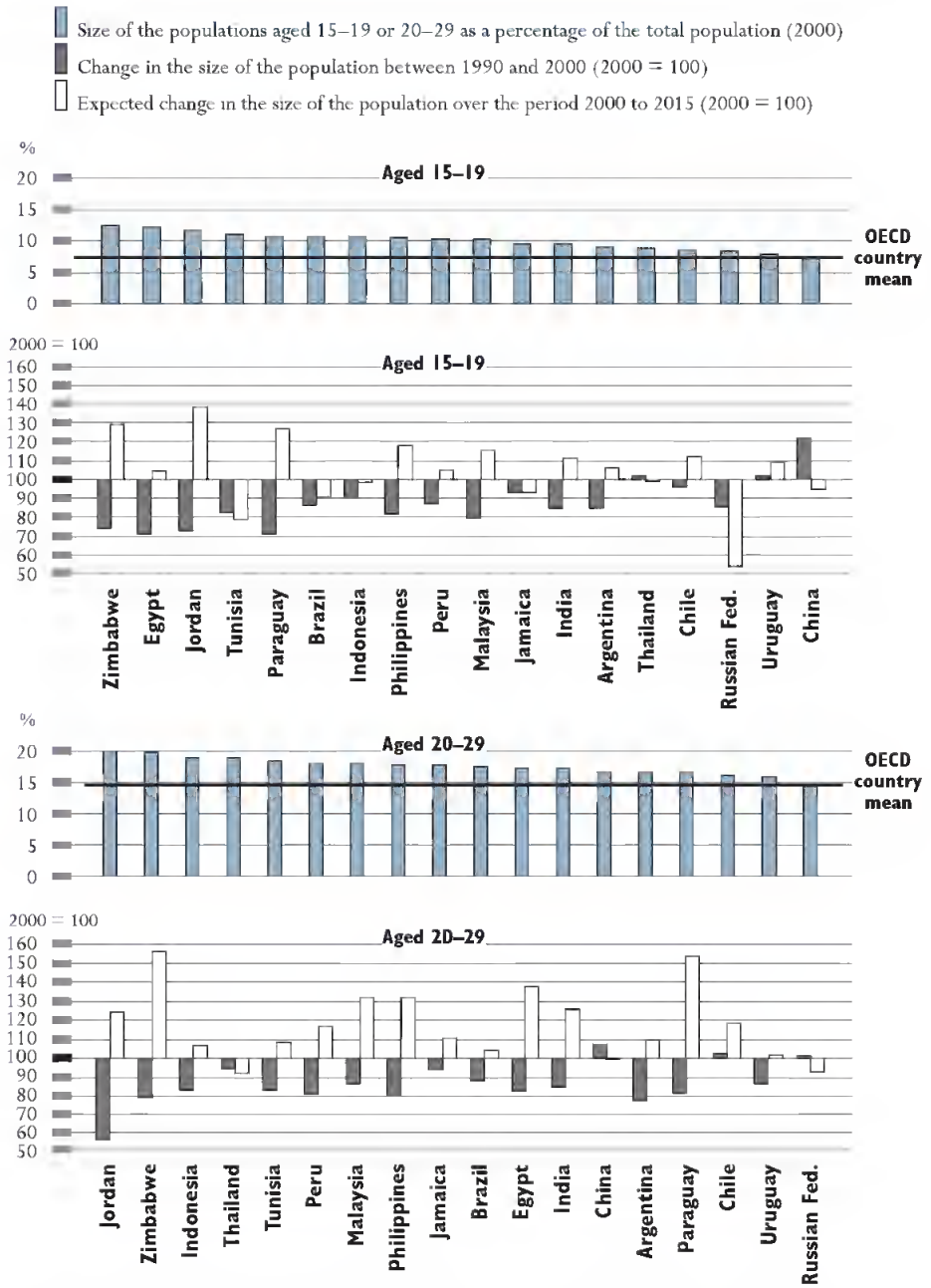
Countries are ranked in descending order of the percentage of those aged 5–14 in the total population
Note: For country-specific notes, please refer to Table 2 in Annex A4.
Sources: UN Population Division and OECD/UNESCO WEI.

In this context, it is interesting to assess the likely impact of these demographic changes on the financial education effort that will be required from WEI countries to simply maintain current participation patterns and teaching conditions.

Figure 1.18 presents changes in expenditure on primary and lower secondary, upper secondary and tertiary education, expressed as a percentage of current GDP, that will result solely from projected increases in the size of the target populations at each of these levels. These estimates are based on the assumption that all other elements of the education cost – e.g. student-teacher ratios, teacher compensation – remain at current levels and that all current and capital expenditure evolves proportionate to the number of teachers, hence to the number of students.

According to this simulation, the demographic challenge will be highest for Paraguay, Jordan and Zimbabwe while China, Jamaica and Thailand

Figure 1.17
Relative size and expected changes in the population aged 15–19 and 20–29, 2000

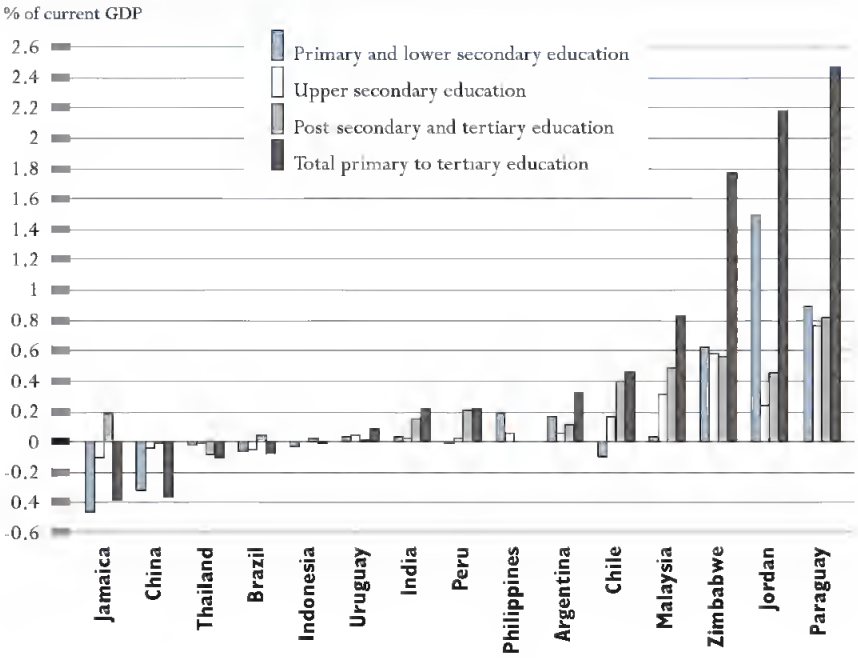


Countries are ranked in descending order of the size of the population aged 15–19 and 20–29 as a percentage of the total population.

Note: For country specific notes, please refer to Table 2 in Annex A4.

Sources: UN Population Division and OECD/UNESCO WEI.

Figure 1.18
Change in expenditure on education relative to current GDP as a result of demographic pressures, by level of education, 2000–2015



Source: OECD/UNESCO WEI.

can expect some easing of their financial education burden over the next 15 years. In Paraguay, meeting the additional demand for education with current standards and cost patterns would result in an increase in education expenditure equivalent to nearly 2.5 per cent of current GDP. In Zimbabwe, the respective additional cost would amount to 1.8 per cent of current GDP. These increases need to be interpreted in light of current levels of spending. The increase in expenditure, relative to current levels of spending, will be especially high in Paraguay (+ 29 per cent) and Zimbabwe (+ 25 per cent). In other WEI countries, although the changes in expenditure will not be as dramatic, they will require careful planning.

Besides demographic trends, educational authorities have to consider increases in enrolment rates as part of the equation.

Interestingly, in Paraguay and Zimbabwe all three levels of education yield a similar increase in overall spending while in Jordan the increase in education expenditure will come largely at the primary and lower secondary levels with an increase of almost 1.5 percentage points relative to current GDP at those levels alone.

Education policy-makers can consider two options. The first one, bearing the increase in education expenditure, requires an assessment of the magnitude of change for careful planning of public budgets. The second option is to

reform education systems to make them more cost-efficient and allow a reduction in unit costs. These decisions need to be made, however, within the context of dynamic education systems. Progress achieved in the past decades has already translated into an increased demand from the community for wider access to further levels of education. Hence, maintaining current enrolment rates is often a scenario that is already out of date and educational authorities have rather to consider increases in enrolment rates as part of the equation.

These elements have, therefore, been incorporated into simulations by considering the financial implications of increases in enrolment rates as well as variations in unit costs. These additional scenarios envision the consequences of ambitious enrolment goals in addition to demographic trends, using the OECD average and best WEI performance (average of the three best-performing countries) as benchmarks. Since nearly all WEI countries have now reached universal participation at the primary and lower secondary levels of education, these simulations have been carried out at the upper secondary level where the main education challenges will take place.

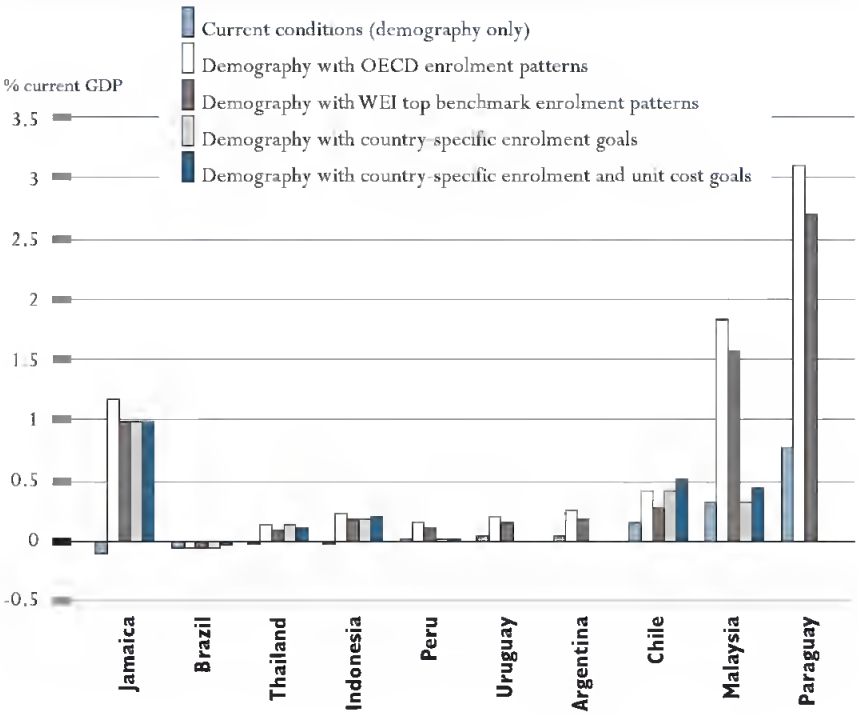
Besides the implications of demographic trends and ambitious enrolment goals, the simulations also consider the most likely change in expenditure given actual national policy goals on participation and unit cost trends. Countries may, indeed, trade off quantity and enrolment rates for cost patterns. A fifth scenario accounts for this possibility. However, since countries often do not have quantified goals in terms of unit costs the simulations are based on a restrictive assumption of a 5 per cent change in unit costs, either upward or downward, for the purpose of illustration.

Human capital accumulation is a real financial challenge for some WEI countries, raising the question of whether current education funding patterns should evolve to make public budgets more manageable.

At the upper secondary level of education, Figure 1.19 indicates that while Brazil faces a favourable situation, with a slight decrease in demographic pressures and no further progress needed to reach the WEI and OECD benchmarks, the challenges are highest for Paraguay, Malaysia and Jamaica. These countries would require additional investments in education amounting respectively to 2.6, 1.6 and 1.0 per cent of their current GDP to reach the WEI benchmarks. Given that Malaysia already spends one quarter of its public budget on education (see Table 14 in Annex A4), it is not surprising that this country will most likely adopt less ambitious goals in the middle term.

By contrast, Indonesia, Chile and Jamaica are aiming at expanding their participation rates towards the WEI or OECD benchmarks. In Jamaica, the cost of moving towards WEI participation benchmarks is slightly lower than in Malaysia at 1 per cent of current GDP. As a result, Jamaican authorities plan to take up the challenge and increase levels of upper secondary participation

Figure 1.19
Change in expenditure on upper secondary education relative to current GDP as a result of demographic pressures, enrolment scenarios and policy goals, 2000–2015



Source: OECD/UNESCO WEI.

but will keep unit costs constant in order to keep the additional burden at manageable levels. In Indonesia and Chile, however, educational authorities also expect increases in their unit costs in addition to ambitious enrolment goals. These policy options will result in additional expenditure for upper secondary education equal to 0.2 per cent of current GDP in Indonesia and 0.5 per cent in Chile.

Overall, these simulations highlight the magnitude of the financial challenge faced by some WEI countries in order to foster human capital accumulation. These changes in education expenditure are, however, expressed relative to current GDP, leaving scope for some alleviation of the financial burden of education if progress in education participation is accompanied by sustained economic growth.

The trade-offs faced by policy-makers are, nevertheless, brought to light. Progress in recent decades has already placed a strong burden on current public budgets in WEI countries. In that context, the high costs incurred

by several WEI countries' proactive education policies raise the question of whether current funding patterns should evolve to make public budgets more manageable. In particular, the question of who should pay for this expected increase in the cost of education is especially keen.

The next chapter will, thus, complement the background analysis presented here by providing a more detailed analysis of the current modalities and paths to education finance in WEI countries.

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Chapter 2

PUBLIC AND PRIVATE ROLES IN EDUCATION

Prepared by Albert Motivans
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INTRODUCTION

One measure of the importance of education to individuals and societies is the link to human capital and economic growth. Chapter 1 shows that more education leads to greater earnings for individuals and to improved economic returns for society at large. But educational outcomes extend beyond measures of individual or national income. Education is a force that develops well-rounded and engaged citizens, and builds more cohesive and participatory societies. Indeed, the economic and social returns of education are so intrinsic and so considerable that access to a quality education is internationally recognized as a basic human right.

Education is so important to individual development and well-being that it is internationally recognized as a human right.

In WEI countries, there is a push to extend the reach and thus the benefits of education. These predominantly middle-income countries have largely met the goal of universal basic education and now seek to widen access to and improve the quality of secondary and tertiary educational programmes. These goals carry considerable financial demands and many WEI countries face constraints in generating additional public and private resources.

Extending the benefits of educational opportunity means addressing constraints in terms of public and private resources.

WEI governments are committed to improving educational outcomes but they do so in the context of often highly unequal societies. In fact, inequality in the education system, particularly at post-secondary levels may actually reinforce broader social inequalities. Some governments have made great efforts to mitigate the effects of poverty and social exclusion through the education system, but many challenges remain. These challenges include both ensuring that educational opportunities are equitably distributed at all levels of schooling and that the expansion of higher levels of education does not come at the expense of maintaining quality primary education. These are important principles that guide investment in education and influence its returns. Economic arguments also suggest that a more equal distribution of educational opportunity helps to sustain economic growth (Bruno et al., 1995) and that investment in universal primary education results in large benefits for society.

Investment in education should be guided by concerns about how it can help equalize social disparities and promote sustainable economic growth.

The goals of expanding education systems and maintaining equity are inextricably linked to questions of education finance: How much do countries invest in education? How do governments support schools? What role does the private sector play in provision of education? How do students and households contribute financially to education? Perhaps the main question is: who pays for education in WEI countries?

To begin with, levels of investment in education vary widely across WEI countries, in some cases representing a rather small base from which to broaden the education system – and ensure quality at the same time. Similarly, WEI governments use a wide assortment of mechanisms to fund

The overall balance between public and private funding varies by level of education and type of school with a greater share of private spending at higher levels of education.

public and private schools and to target specific student populations. Private provision of education is uncommon at the primary level but prevalent at both secondary and tertiary levels in some countries. Likewise, students and families pay considerable amounts towards education, especially at post-secondary levels and private schools. The overall balance between public and private funding varies widely by level of education and type of school. All of these factors have implications for the delivery and quality of educational services and, especially, for the equitable distribution of access to learning opportunities.

The distinction between public and private schools in terms of funding has become less clear-cut. It is more useful to think in terms of strategies that promote the best performance from different types of education providers.

Moreover, the debate is no longer as clear-cut as 'public versus private schools' because the range of schooling models has grown and distinctions have become blurred (Buckland, 1999; Bray, 2002). For example, direct public funding to government-dependent and independent private schools is prevalent. So are indirect public subsidies to students and households. Moreover, students and households make considerable contributions to public schools. Even in countries bound by constitutional law to provide 'free' education, there are elements of cost-sharing and community-financing strategies. In the end, it can be argued that the distinction between private and public is less important than the strategies and incentives used to promote the most equitable and efficient provision of education among all types of providers (Wolff and de Moura Castro, 2001; Bloom et al., 2000).

The aim of this chapter is to present a broad overview of how education is financed in WEI countries with emphasis on the strategies and mechanisms used to fund educational institutions. It maps out how financing flows from the main sources of education funding – public, private and international – and describes how resources move through the system to schools.

Section 1 looks at overall levels of public and private resources for education in WEI countries. It focuses on levels of funding and whether countries with similar economic resources and student populations are investing more or less in education. It also looks at how these resources are distributed across levels of education and the rationale for public spending on education.

Section 2 focuses on the public sector as a source of education funding. The way that governments finance education is a key factor in judging the overall performance and outcomes of education systems (NCES, 2001). The way in which governments finance education also broadly reflects the model of education system they seek to develop. This section looks at the roles of different levels of government in funding education and the extent to which the state supports the private provision of education.

Section 3 examines the private sector as both a provider of educational services and a source of educational expenditure. Private educational

institutions are widespread in WEI countries and enrol a larger proportion of students than in OECD countries. Private expenditure is an important component of education financing in many WEI countries and, although it is not perfectly measured, provides a rough estimate of what households contribute towards the costs of the education system.

Cross-national comparisons can help policy-makers assess whether they are adequately funding education and using financial resources in the most effective, efficient and equitable manner. Comparing different processes and mechanisms used to finance education systems also shows how national policy-makers respond to different contexts in order to achieve national goals and aspirations.

This report benefits from improvements in the quality and comparability of WEI education finance indicators.

International financial statistics are often criticized for shortcomings in comparability (Barro, 1998). While there is still much room for improvement, these indicators, particularly in terms of public expenditure, benefit from efforts taken as part of the WEI Finance Comparability Study. In the framework of the overall WEI programme, national site visits were carried out in 11 countries during 2001 and 2002 with the goal of documenting data sources underlying finance indicators and identifying definitional problems, data gaps and areas that require further development.

1 FINANCING EDUCATION SYSTEMS

Education systems face new challenges in terms of content and delivery and meeting demand...

Demands *on* education are growing in WEI countries – rapid technological change and the move towards knowledge-based societies has meant a reassessment of the content and delivery of education to better face the challenges of the 21st century. Demands *for* educational opportunities are also growing in WEI countries – participation in post-compulsory education has been increasing steadily due to population growth, higher rates of primary completion and a perception of the positive gains from progressing to and completing secondary- and tertiary-level programmes.

...that have important implications for education finance.

Widening participation at higher levels of education as well as maintaining equity and education quality have important implications for education spending. This section begins by describing several contexts that influence overall levels of available resources for education. It then addresses important policy questions relevant to these aims, e.g. whether funding levels are sufficient and how countries distribute resources across the education system.

Finally, this section sets out a simple model representing sources of funding and their subsequent flow to educational institutions. This model serves as an organizational framework for subsequent sections that examine the flows and public-private contributions to overall education expenditure in greater detail.

Contexts for education spending

Macroeconomic stability is vital to ensuring stable flows of resources for education.

The macroeconomic situation and public fiscal policy have an immediate and important impact on resources available for education. The economic crises that hit Indonesia, Malaysia, Thailand and the Russian Federation in the late 1990s led to significant declines in output and thus public revenue. As a result, the public sector faced hard budget constraints, real spending on education fell and spending patterns across education levels shifted. With declining real wages and rising unemployment, individuals and households also had fewer resources to devote to education. At the same time, the opportunity costs of education increased as families looked to supplement income sources. From any perspective, economic instability constrains the resources available for education.

In recent years, there have been both economic upturns and downturns in WEI countries.

In the few short years since the financial crises of 1997–98, there have been both economic upturns and downturns in WEI countries (see Table 2.1). GDP growth rates for 2000 point towards recovery in countries such as Malaysia, Indonesia and Thailand, although still falling short of pre-crisis levels. The Russian Federation also posted positive growth for the second year in a row. China, India, Egypt and Tunisia have seen healthy rates of economic growth over the period. There were, however, worrying signs of decline in 1999 and 2000 in Argentina, Uruguay and Zimbabwe that have led to deepening economic crises and concerns about growing political instability.

Table 2.1
Annual GDP growth, 1998–2000
In percentage

	1998	1999	2000
Russian Federation	-4.9	3.2	8.3
Malaysia	-7.4	4.2	8.3
China	7.8	7.1	7.9
Chile	3.4	-1.1	5.4
Egypt	5.6	6.0	5.1
Indonesia	-13.0	0.3	4.8
Tunisia	4.8	6.2	4.7
Brazil	-0.1	0.8	4.5
Thailand	-10.2	5.8	4.3
Philippines	-0.8	3.2	4.0
India	6.8	6.5	3.9
Jordan	2.9	3.1	3.9
Peru	-0.4	1.4	3.1
Jamaica	0.5	0.4	0.8
Paraguay	0.4	0.8	0.3
Argentina	3.9	3.2	0.5
Uruguay	4.6	3.2	1.3
Zimbabwe	3.7	0.1	4.9

Note: Data sorted by descending values for 2000.
Source: World Bank, 2001; 2002.

The extent to which the state provides public services is related to their capacity to collect revenues.

The extent to which the public sector plays a role in the provision of goods and services is important when comparing levels and sources of education expenditure. In some countries, the government plays a dominant role in generating revenue to finance public services and public expenditure plays a redistributive role in society. In other countries, the role of government is more narrow. One measure of government's role is the extent to which the state collects revenue from taxation and other sources, i.e. the size of the pool of resources from which public expenditure and, in particular, spending for education is drawn.

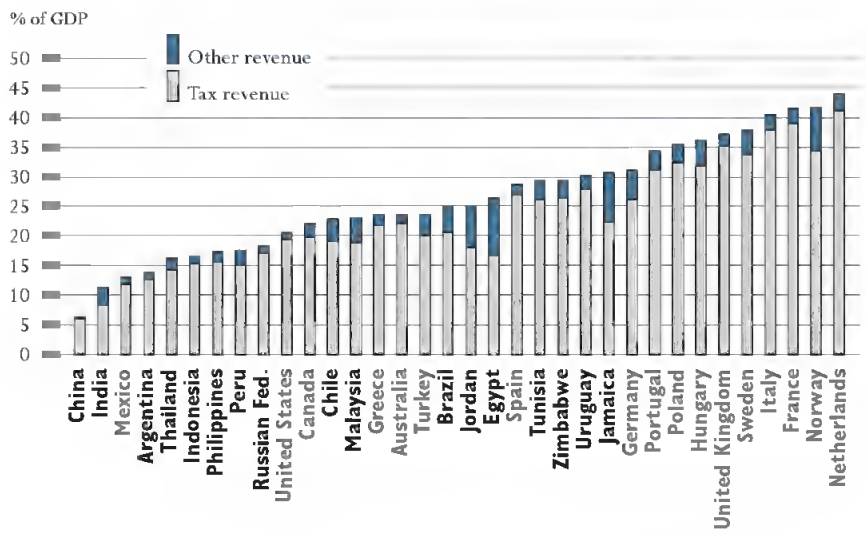
The share of tax-based revenue differs considerably between WEI and OECD countries, ranging from 6 per cent in China to 40 per cent in the Netherlands.

Figure 2.1 presents the share of the current revenue of central governments as a percentage of GDP among selected WEI and OECD countries. Current revenue is disaggregated into two categories: tax-based and other revenue. The share of tax-based revenue varies widely: from 6 per cent in China to more than 40 per cent of GDP in the Netherlands. For Jordan, Egypt and Jamaica, other sources of revenue make a disproportionate contribution to current revenue compared to other countries.

Compared to similar WEI countries, Thailand and Peru collect much lower shares of public revenues.

In most WEI countries, the central government is largely responsible for revenue generation and expenditure allocation. Among these countries, Thailand and Peru have considerably lower revenues as a share of GDP in comparison with other countries. In relative terms, they collect about

Figure 2.1
Current revenue as a percentage of GDP, 1998



Note: All revenue to the central government from taxes and non repayable receipts (other than grants) only.

Source: World Bank, 2002.

half the share of GDP in public revenues as do other WEI countries, such as Uruguay and Jamaica.

Among WEI countries that comprise federal states, China and India have considerably lower levels of central government revenue compared to Brazil.

Since this indicator measures only central government revenue, it underestimates the role of the state in countries where regional or local governments generate public revenues and in countries where public deficits result in substantially higher levels of actual public spending. WEI countries that are organized in federal states, such as China, India, Argentina and the Russian Federation, tend to fall at the lower end of the revenue range. Levels of central government revenue in China and India are particularly low compared to other WEI federal states, even taking into account the fact that these two most-populous nations have strong regional governance; e.g. the share in China is only one fifth of that in Brazil.

Public revenue is private expenditure collected by the state to finance basic public goods, such as education, that, in theory, benefit all members of society.

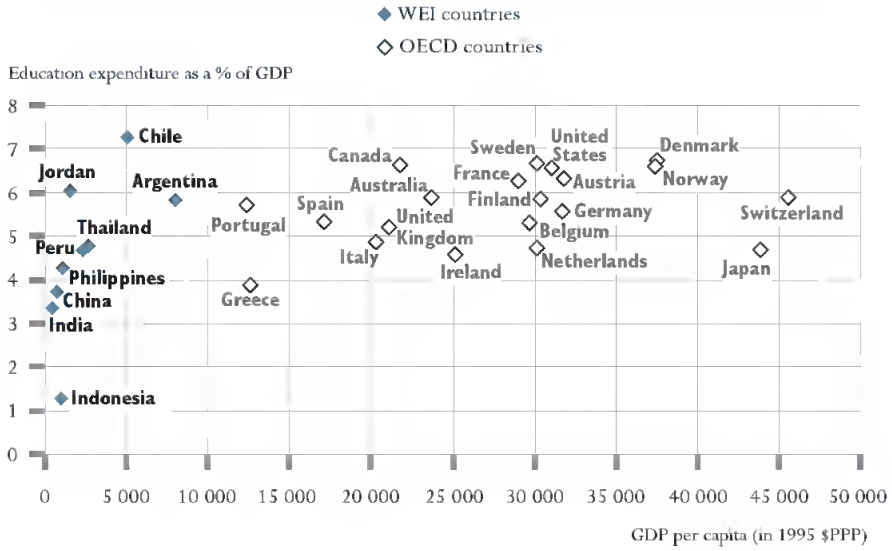
The total revenue generated by all levels of government represents the pool of resources from which public spending on education is drawn. As the amount of these resources changes, there is a potential impact on their allocation across levels of education. While stating the obvious, it is important to note that public revenue is collected primarily through the taxation of individuals, households and other private entities. Thus, private money is channelled through the government to indirectly fund education as well as other public services. Often these services – traditionally seen as public goods – play a redistributive role. This is an important principle for interpreting the levels and sources of funding. In effect, one of the flows to educational institutions is from household sources through governments. Individuals and households help to finance education both indirectly through the state (whether they use services or not) and through direct payments to educational institutions.

Greater national wealth does not necessarily mean that countries spend more, in relative terms, on education. Figure 2.2 shows the relationship between GDP per capita, which represents the national wealth of the country adjusted for its population size, and total (public and private) expenditure on education. Even among countries with similar levels of GDP per capita there can be substantial variation in the share of GDP devoted to education. For example, Greece and Portugal have roughly similar levels of GDP per capita but Portugal devotes a share to education that is one third greater. In most OECD countries, the share of investment falls in the range of 4.5 to 6.5 per cent of GDP, regardless of the level of GDP per capita.

Current levels of education spending in WEI countries bear little reference to their level of national wealth.

There are striking differences between the WEI and OECD countries, both in terms of GDP per capita and education spending levels. Firstly, there are much higher absolute levels of GDP per capita in OECD countries and this can mean considerable differences when relative measures of education expenditure are translated into absolute amounts of resources. In WEI

Figure 2.2
Education expenditure as a percentage of GDP and GDP per capita, 1999



Note: Includes public and private expenditure.

Sources: UNESCO-UIS/OECD; Table 11 in Annex A4 for education expenditure as a share of GDP; World Bank, 2002 for GDP per capita.

countries that face low levels of national income and of the proportion that is invested in education, current spending levels may not be adequate to meet goals for expanding education provision.

Economic disparities are high in WEI countries, especially in Latin America – an important context for the generation of additional revenues for education.

While GDP per capita is a measure that divides national income equally among the entire population, in reality there is considerable variation in its distribution. Economic disparities are prevalent in many WEI countries. Measures of income inequality (e.g. Gini coefficient) in Latin American countries such as Brazil, Paraguay and Chile are more than twice as high as in most OECD countries (OECD/UNESCO UIS, 2001). There is concern that disparities in terms of access to educational opportunities may actually reinforce inequalities in income distribution and society in Latin American countries (ECLAC, 1999). In fact, the average Latin American adult in the richest 10 per cent of the income distribution has seven more years of education than an adult in the poorest 30 per cent (Hausmann and Szekely, 1999).

The high levels of inequality and the extent of poverty in WEI countries are important contexts when considering the potential role of the private sector (individuals and households) as a source of additional resources for education. The ability to contribute is sharply differentiated at the level of individuals, households, neighbourhoods, school districts and regions.

Figure 2.3 presents overall expenditure as a percentage of GDP for WEI countries. The figure is divided among those countries where national estimates of private expenditure on education are available and those where only public expenditure is represented as a share of GDP. The OECD country mean of 4.9 per cent refers to a combined public and private figure.

In comparing levels of education spending, it is important to note that national education systems differ in the populations they cover and the services that they provide. Education systems have different policy priorities and allocate different amounts for a range of services such as grants and loans, school resources, transportation, health care and other ancillary services.

Combined public and private expenditure on education ranges from about 1.2 per cent of GDP in Indonesia to 9.9 per cent of GDP in Jamaica. Private expenditure plays an important role in countries with high shares of expenditure.

In terms of overall education expenditure, there is a wide range across WEI countries from about 1.2 per cent in Indonesia to 9.9 per cent in Jamaica. Both India and China, noted earlier for their low levels of central government revenue, also appear at the lower end of the scale in terms of education spending. A number of WEI countries exceed the OECD mean and private contributions play an important role in the high level found in these countries, including Paraguay, Chile and the Philippines. The measurement of private expenditure on education is still an area that presents difficulties. While the comparability of different national estimates has been improved, considerable methodological work is still needed in this area.

Among WEI countries where estimates of private expenditure are not available, Tunisia and Zimbabwe invest a high share of their GDP in education. Public spending in each country exceeds the OECD country average for both public and private expenditure from the public sector alone. In Zimbabwe, where schools run by communities with partial state support are prevalent, significant levels of private support for education can also be expected.

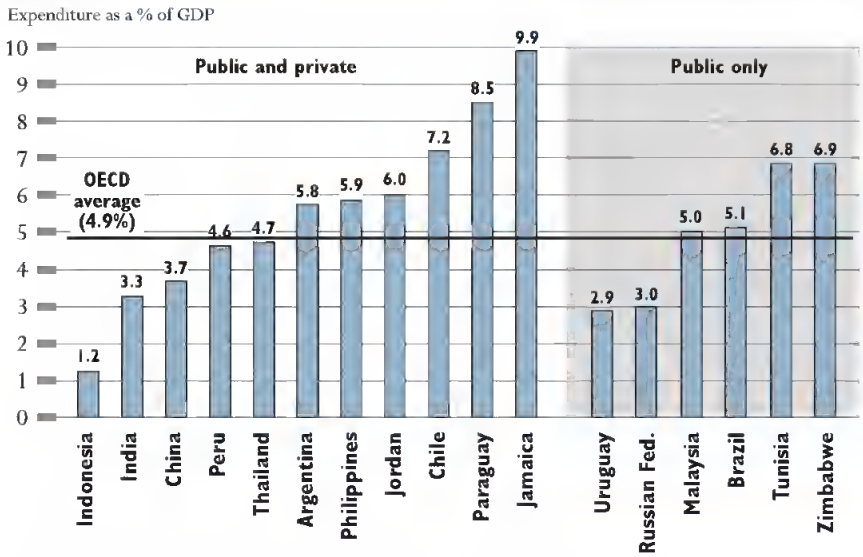
The distribution of resources by level of education

Policy-makers face difficult decisions in balancing limited public funds and societal needs. An important context for allocating resources by level of education is the growing demand for participation at higher levels of education.

Demand is increasing for secondary and tertiary education due to high primary participation...

The demand for education, especially at secondary and tertiary levels, has continued to grow in WEI countries. One reason is that high rates of participation at the primary level (see Figure 1.10 in Chapter 1) have increased demands for further education. Indeed, some countries can still significantly expand opportunities at the secondary and tertiary levels. For example, the lowest enrolment rates among youths of secondary-school age are found in Indonesia, Paraguay and Zimbabwe and are only slightly higher in the Philippines and Tunisia.

Figure 2.3
Expenditure on education as a percentage of GDP, 1999



Note: For country-specific notes, please refer to Table 11 in Annex A4.
Source: OECD/UNESCO WEI.

...and because of continued population growth in some WEI countries.

Another reason is, simply, higher rates of population growth. As Chapter 1 shows, in Jordan, Zimbabwe and Paraguay, more investment will be needed simply to maintain current enrolment rates for a growing youth cohort. For other countries, especially the Russian Federation and, to a lesser extent, China and Thailand, declining population growth may relieve pressure on education systems.

The generally accepted rationale for state spending on education is that it is a public good...

An oft-cited principle is that public funds should be used to provide goods and services that are deemed public goods. Public goods are those goods and services that benefit society as a whole, not just individuals who are able or willing to pay for them. Education is often considered a public good because of the positive economic and social returns to the country at large.

...although views on the extent to which the state should fund education have changed as participation expands beyond the primary level.

However, there has been a shift over time, as reflected in international rights instruments, regarding the extent to which the state should guarantee cost-free education (Buckland, 1999; Bray, 2002). While education is still perceived as a public good that benefits society, arguments favouring cost-recovery, particularly at the tertiary level, have been gaining support.

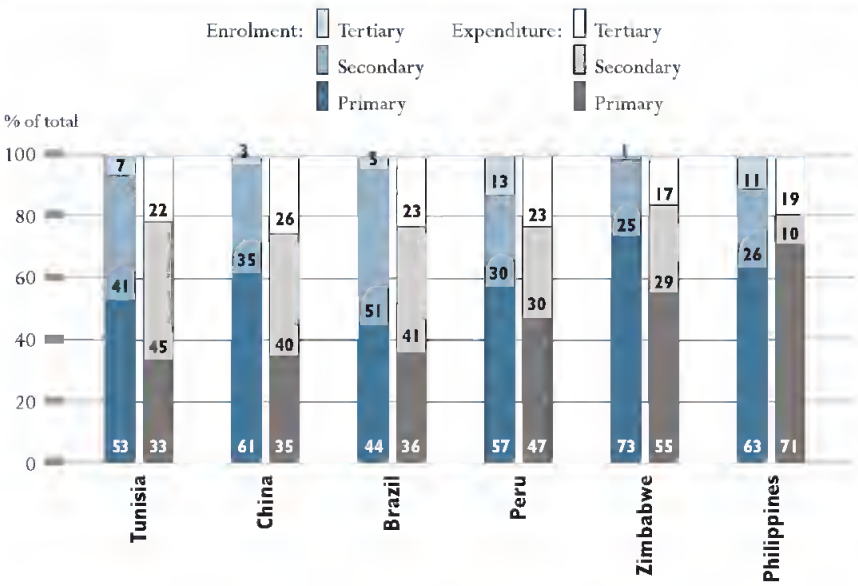
As shown in Chapter 1, most WEI countries are close to or have achieved universal primary education. Constitutional law in most WEI countries provides that basic education shall be free, compulsory and accessible to all.

Public spending on basic education is an investment that benefits the poor.

At the primary level, the rationale for public support of education appears quite strong. Unit costs are low compared to other levels of education and investment in primary education has been shown, through benefit incidence analysis, to favour the poor (World Bank, 2001). Similar equity-based arguments can be made for secondary education. However, at the tertiary level, unit costs are considerably higher and the composition of students tends to be over-represented by those from higher income households.

Since tertiary education has been shown to provide greater returns to the individual, governments may assign greater responsibility for funding tertiary and even secondary education to individuals and households to reflect this shift in benefits. The argument then is to recover some costs directly from users and to target public support to those who are more economically disadvantaged. At the same time, governments have introduced a range of mechanisms to lower cost barriers and enable higher education opportunities for the poor. Nevertheless, concerns about this type of rationale have been raised regarding the effects of unequal access to higher education (Colclough, 1991) and whether governments are able to accurately target disadvantaged student populations (van de Walle and Nead, 1995).

Figure 2.4
Distribution of enrolment and public expenditure[1] by level of education, 1999



1. Includes international sources.

Note: For country specific notes, please refer to tables in Annex A4.

Source: OECD/UNESCO WEI.

The cost of educating an individual increases with level of education.

Figure 2.4 indicates how well the distribution of public funding and enrolment by education level reflects these rationales for public spending. It would be expected that expenditure per student rises along with level of education, due to the economies of scale implicit in basic education and the higher costs associated with more specialized staff and additional school resources needed (e.g. laboratories, media libraries, etc.) at higher levels of education. The age structure of the population and changes in the school-age population may also influence shares of expenditure. Differences in expenditure shares at secondary and tertiary levels may also be related to the prevalence of independent private institutions that do not receive any public support.

Zimbabwe and the Philippines devote the largest proportions of education spending at the primary level.

The distribution of expenditure roughly indicates the policy priorities in a country. In Zimbabwe and the Philippines, the majority of resources are focused on primary education where the majority of students in the system are found. In fact, the Philippines is the only WEI country where the share of expenditure devoted to primary education exceeds the share of primary students in the total school population. Generally, the ratio of spending to population is fairly similar at the primary and secondary levels.

The ratio of public spending on tertiary education is often disproportionate to the share of tertiary students, particularly in Zimbabwe, China and Tunisia.

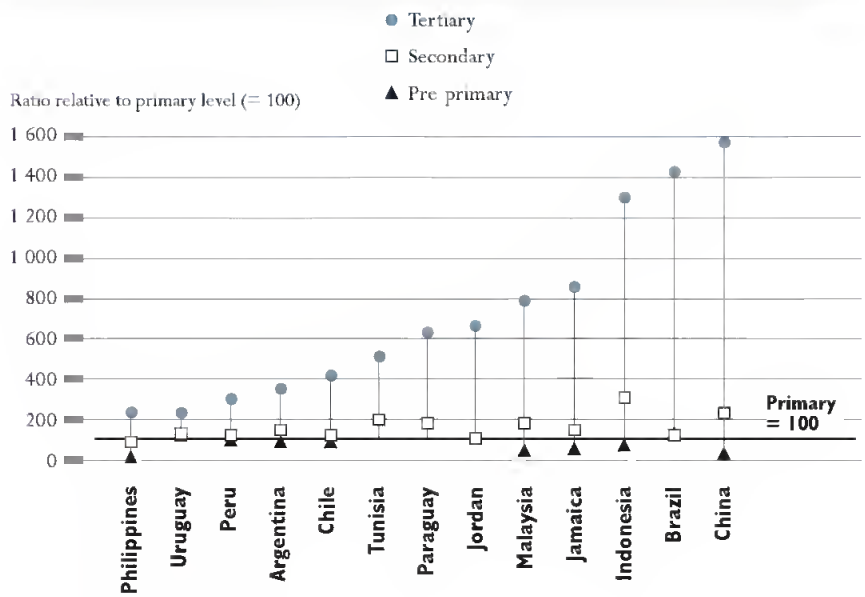
This is much less the case at the tertiary level where the ratio of public spending is disproportionate to the share of students. The difference is particularly large in Zimbabwe where the share of spending on tertiary education is 12 times the share of tertiary students. This difference is also apparent, to a lesser extent, in China and Tunisia. In Peru and the Philippines, the share of tertiary spending is less than twice the share of students.

Differences in costs per student by level of education can also influence overall proportions of spending. Figure 2.5 shows the cost per student by level of education related to the cost per primary student. Thus, in Malaysia, costs are twice as high for a secondary student and eight times as high for a tertiary student as for one at the primary level. The relative difference in costs per tertiary student are highest in China, Brazil and Indonesia where they represent more than 12 times the cost of a primary student. In China and Indonesia, the relative cost per secondary student is more than twice that of a primary one. Differences in costs between primary and other levels of education are more moderate in the Philippines, Uruguay and Peru.

Sources and flows of education funding

This section now turns to a broader picture of education finance in WEI countries based upon a stylized model of the sources, flows and destinations of educational expenditure. The subsequent sections examine the sources of education finance, emphasizing the range of strategies and mechanisms that are used to fund educational institutions.

Figure 2.5
Differences in per-student expenditure by level of education, 1999



Note: For country specific notes, please refer to Table 9 in Annex A4.
Source: OECD/UNESCO WEI.

This model of education finance (see Figure 2.6) incorporates the three main sources of funding for education: the public sector, the private sector, and international sources.

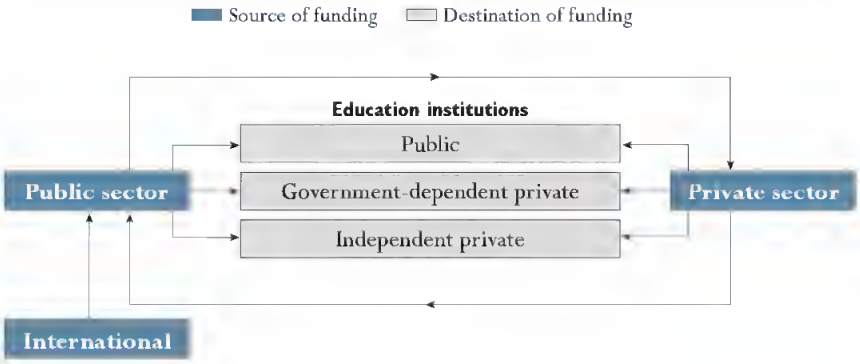
International sources of education funding make only a minor contribution to total costs in most WEI countries.

Public sector expenditure refers to funds spent by governments on educational institutions. This source of funding can be further divided by different levels of government (e.g. central, regional and local) that have responsibilities for financing education. The private sector includes contributions from individuals, households and other private entities (e.g. religious groups, firms, associations).

International sources of funding make up only a very small proportion of total education expenditure in WEI countries (see Box 2.1). These include loans and grants from multilateral organizations (e.g. development banks), bilateral aid and cooperation, and funds from international NGOs. These funds are typically channelled through central governments but, on rare occasions, they are transferred directly to educational institutions.

Funds from all of these sources are destined for educational institutions, which are basically those that provide instructional services to individuals or education-related services to other educational institutions, regardless

Figure 2.6
Sources, flows and destinations of education funding



Box 2.1
International sources of funding for educational institutions

The rationale for the involvement of international development institutions in middle-income countries, such as most WEI countries, is often questioned. It is argued that these countries have reached an adequate level of economic progress and thus are not in need of external assistance. However, *many* of the WEI countries face an agenda that calls for continued partnership in funding as in policy and institutional reform (Fallon et al., 2001).

In several WEI countries, most notably Egypt, Jordan and Zimbabwe, international sources of funds represented large proportions of central government expenditure in the 1990s. By the late 1990s, however, the share of international funding dropped considerably to current levels of less than 10 per cent of central government expenditure, except in Jordan with a 1999 level of 17 per cent (World Bank, 2002).

Measuring flows of international funding for education is often difficult. One challenge is to distinguish between *commitments* made by donors and when and if the funds are *actually spent* on educational institutions. Another difficulty lies in accurately identifying education expenditure that falls under a project in a different sector, e.g. health, but that has an education component.

In terms of international funds as a share of public direct expenditure on educational institutions, Jordan has the largest share among countries with available data, representing 6.5 per cent of total direct expenditure for primary and secondary education, followed by Jamaica (4.8 per cent) and Paraguay (4.5 per cent).

of who governs them. With respect to governance, it is important to distinguish between the funding source and the service provider (e.g. public or private).

Educational institutions can be categorized both in terms of governance and funding.

There are three categories of educational institutions: public, government-dependent private and independent private. Government educational institutions are defined as those which are state-managed and publicly financed. Government-dependent refers to institutions that are independently managed but receive substantial support – more than 50 per cent of operating funds – from the state. Independent private institutions are those that are independently managed and receive less than 50 per cent of total expenditure from government sources. Despite the funding distinction, the latter two categories are typically grouped together as the 'private' sector. In any case, in most countries, many facets of operation of all these types of institutions are regulated by the state (e.g. curriculum guidelines, teacher qualifications and standards).

Funding for educational institutions is both direct and indirect.

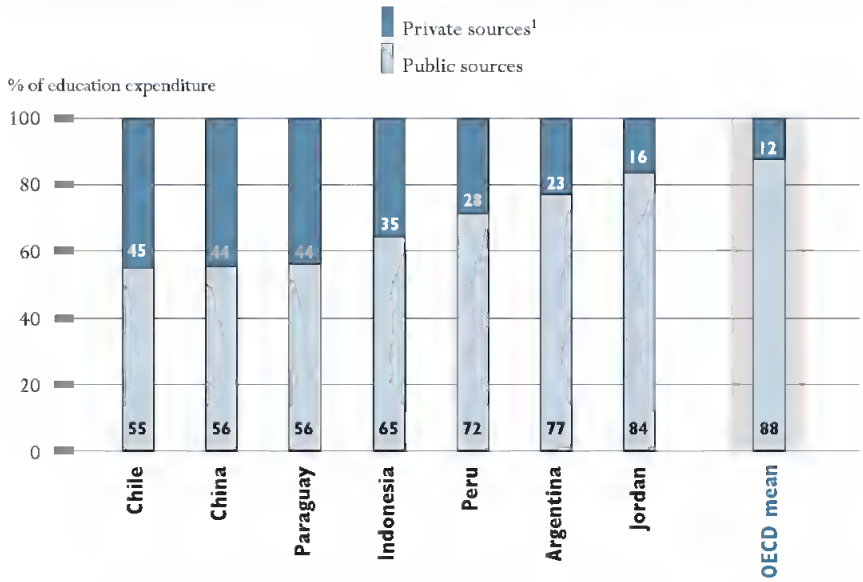
Expenditure flows may be direct or indirect to educational institutions. An example of a direct flow would be funds given directly to the educational institution either by the state or by households, e.g. tuition fees. An indirect flow is one that is allocated through the other sector. For example, private expenditure may indirectly support education via state taxation and public funds may flow indirectly to institutions through a wide range of subsidies provided to individuals and households. Again, this circular path reiterates an important principle of education funding. Keeping in mind the differences in the capacity across and within the public and private sectors to provide resources, *there is only one pool of resources* and many different ways for it to flow to educational institutions.

Capturing these flows is obviously problematic. For a number of WEI countries the finance data presented here represent budget obligations rather than actual allocated expenditure. There is a realistic concern that funds budgeted for education may not always end up at educational institutions as planned.

The contribution of public and private sources of education finance is represented by the share that each provides relative to total education expenditure (see Figure 2.7). Among the WEI countries shown in this figure, the share of total education expenditure that can be attributed to private sources (which includes state subsidies to students and households) is considerably higher than that in most OECD countries.

In Chile, China and Paraguay, the total share provided by private sources exceeds 40 per cent of the total expenditure on education. This large difference can be attributed to several factors. Firstly, there may be low

Figure 2.7
Distribution of education expenditure by source of funds, 1999



1. Including subsidies attributable to payments to educational institutions received from public sources.

Note: For country specific notes, please refer to Table 13 in Annex A4.

Source: OECD/UNESCO WEI.

levels of public spending. Secondly, there may be a greater volume of public subsidies to the private sector. Thirdly, there may be greater private sector provision of education, especially at the tertiary level, with little or no direct state support. A fourth factor relates to the higher private costs (fees, tuition) associated with public provision compared to OECD countries. These factors are explored in greater detail in the following sections.

The share of expenditure on all levels of education attributable to private sources exceeds 40 per cent in Chile, China and Paraguay.

2 PUBLIC SOURCES OF EDUCATION EXPENDITURE

For most WEI countries, the state plays the predominant role in the management and finance of the education system. How governments fund educational institutions is central to several important policy debates that have gained greater attention in the last decade.

One of these issues is fiscal decentralization, i.e. shifting responsibilities for education finance to lower levels of government. It represents an important policy issue that should be interpreted within the larger context of local autonomy and decision-making in the governance of educational systems. Bringing decision-making and accountability closer to the institution is seen as an approach to improving system efficiency and learning outcomes. However, greater autonomy in school finance can also involve offloading

Greater local autonomy related to education expenditure may create greater efficiency, but also creates risks of greater inequities.

expenditure responsibilities to local authorities. This may exacerbate inequities among schools, districts and regions as those with less potential for revenue generation are placed at a distinct disadvantage.

The manner in which public funds are distributed across levels of governments to these schools, districts and regions thus entails important equity considerations. This section takes a closer look at which government levels carry responsibility for financing education. It reviews the role of central or local governments with respect to broader roles in decision-making and education governance before examining the assignment of expenditure responsibilities and assessing the extent to which countries are more centralized or localized in their approaches.

State support for non-state schools and transfers to students and their families to promote access to education is common in WEI countries.

Another important policy issue is the extent to which governments rely on non-state educational institutions to supplement public sector provision. Interest has focused both on levels of support to quasi-state and private educational institutions and the actual process or mechanisms that enable these transfers. This section looks at the levels of funding channelled to schools, particularly non-state educational programmes (e.g. government-dependent private and independent private institutions). As well, every WEI government subsidizes individuals and households to promote participation in educational programmes. This indirect investment in the education system often aims to improve equitable access to education.

As reflected by the model presented in Figure 2.6, public investment in education can flow directly to educational institutions, often across different levels of government, or indirectly to students, households and private entities (e.g. school associations, enterprises) who then apply the transfer towards goods and services provided by the educational institution. This section distinguishes between the following flows of public investment: 1) directly to educational institutions; 2) through intergovernmental transfers between central, regional and local authorities; and 3) through subsidies, grants and loans to individuals, households and private entities.

Public education spending by government level

In order to distinguish between spending by government level, it is important to first understand the general governance structure of a country. This structure is often reflected in the country's educational governance (NCES, 2002). In most WEI countries, the governance structure consists of two or three main levels of authority. These include a central government, regional government agencies and local government agencies.

The relative importance of each of these levels in terms of education decision-making differs greatly among countries, largely the result of overall political governance structures. Countries where political power is

centralized will see more decisions at the highest levels and where political power is decentralized at regional or local levels (NCES, 2002).

There is substantial variation among WEI countries in terms of the level at which decisions are taken regarding the allocation and use of educational resources. A 1997 survey conducted in 10 WEI countries provides information on the levels of government responsible for decision-making in education. Generally speaking, the central government is more likely to be responsible for decisions with the exception of federal states such as Argentina and India where regional bodies are more influential (see Table 2.2). In other countries, central governments may have the lead role in planning, structures and personnel management while schools make most decisions about the organization of instruction.

In most WEI countries, the central government makes decisions about the allocation and use of funds for education but local authorities seldom have chief responsibility.

In the area of resource allocation and use, the central government is the most common level for decision-making in WEI countries. However, in Paraguay and at the secondary level in the Philippines, schools are more involved in these decisions and local government is the main decision-maker in China. The WEI survey showed that, in terms of the wider context of education decision-making, the highest proportion of decisions at the school level is found in China, Thailand and the Philippines. India, Jordan and Malaysia are countries where fewer decisions are taken at the school level.

Table 2.2
Main levels of decision-making in primary and secondary education, 1997/98

Type of government	Resource allocation/use	Personnel management	Organization of instruction	Planning and structures
Federal				
Argentina	State	State	School	State/school
India	Regional	Regional	Regional/school	Regional
Federal-type				
China	Local	School	School/central	Central/local
Indonesia	Central	Central/school	School/central	Central/regional
Philippines	School/regional	Central/regional	School	Central
Unitary				
Chile	Central	Local	School	School/local
Jordan	Central	Central/local	School/central	Central
Malaysia	Central	Central	Central/school	Central
Paraguay	Central/school	Central	School/central	Central/school
Thailand	Central	Central/school	School/central	Central/school

Note: Results based on 35 decision items in four domains. All items were weighted equally. Respondents were drawn from all levels of government. For further details, see OECD, 2000.
Source: WEI survey on decision making, 1997.

The level of government responsible for financing education sheds light on the state's approach to education.

The relative importance of the level or levels of government that are primarily responsible for financing a national education system is reflected by the origin of educational expenditures. The transfer of funding for education between levels of government is a common tool for balancing regional and local budgets. However, as noted above, local expenditure assignments do not always reflect local autonomy in terms of the allocation or use of funds.

Central funding is common at all levels of education in non-federal WEI countries and only for tertiary education in federal states.

In most WEI countries, the central government directly funds educational institutions (see Table 2.3), although there are often negligible revenues (including in-kind) raised by local governments. Education finance is more likely to occur at multiple levels of government in countries with a federal or federal-type system. Both regional and local authorities are involved in education finance in all federal states at the primary and secondary levels. For tertiary education, the role of financing educational institutions is strictly a central government function for most countries. Regional governments play a role in six countries and local governments provide or use funds for tertiary educational institutions in Brazil.

Table 2.3
Government levels with responsibility for financing education

	Primary and secondary			Tertiary		
	Central/ Federal	Regional/ State	Local	Central/ Federal	Regional/ State	Local
Federal						
Argentina	♦	♦	♦	♦	♦	
Brazil	♦	♦	♦	♦	♦	♦
India	♦	♦	♦	♦		
Russian Fed.	♦	♦	♦	♦		
Federal-type						
China	♦	♦	♦	♦	♦	
Indonesia	♦	♦	♦	♦	♦	
Philippines	♦		♦	♦		
Unitary						
Chile	♦			♦		
Jamaica	♦			♦		
Jordan	♦			♦		
Malaysia	♦			♦		
Paraguay	♦	♦		♦		
Peru	♦			♦		
Thailand	♦		♦	♦		
Tunisia	♦			♦		
Uruguay	♦			♦		
Zimbabwe	♦			♦		

Note: Government levels that represent expenditure of 1 per cent or less are excluded.
Source: OECD/UNESCO WEI.

In most WEI countries, lower levels of government play a marginal role in education finance.

In most WEI countries, lower levels of government are only marginally involved in funding educational institutions. In Malaysia, there are three distinct government levels: central, state and district. State education authorities do not have the autonomy to make policy decisions but do implement policy set at the central level. State-level authorities are limited to the organization of state religious schools and providing some ancillary services, scholarships and loans. Municipalities have no responsibility for education funding, although they make small contributions. In Paraguay, the central government also directly funds public schools. Regional governments, which previously did not play a role in funding, now operate a supplementary nutrition programme. Local authorities provide a small amount of funding for construction and maintenance. In Tunisia, regional bodies called *governorates* are not involved in funding education, and municipalities make only marginal contributions towards pre-primary and primary schools.

In countries with federal governments, e.g. Argentina, Brazil, India and the Russian Federation, all levels of government are responsible for funding primary and secondary educational institutions. In Argentina, regional governments are largely autonomous both in terms of decision-making and finances. Local governments do not have responsibilities for education finance. In India, the state level has the main responsibility for planning and management of education while the central government formulates policy and provides financial assistance for specific reforms.

Federal-type governments in China, Indonesia and others have regional political-territorial units that are typically extensions of the central government. These units act more to carry out the policies of the central government than as independent bodies able to generate significant revenues for education.

Some WEI countries seek to decentralize education finance and others to centralize it.

WEI countries have moved in different directions in terms of education decision-making in the 1990s. The level of authority responsible for decision-making in terms of education finance has moved from the central government to regional or local governments in Argentina, Brazil, China and the Russian Federation. Indonesia is currently undertaking extensive education reform that seeks to enable greater autonomy for education governance and finance at the level of the school district. The central government will remain the main source of education spending but districts will become the main entities for financing education. At the same time, there has been a move towards greater centralization in India (OECD/UNESCO UIS, 2001).

In some cases, the original source of educational expenditure can be different from the level where it is used. For example, in Chile, local education authorities govern and fund public schools in their districts, but a considerable proportion of funding is the result of intergovernmental transfers from regional and central authorities. At the same time, the regional government receives a

Box 2.2

Equity concerns and the redistribution of public funds for education in Brazil

The primary education system in Brazil is divided in terms of responsibilities between state (provincial) schools and municipal schools. In the past, state and municipal tax revenues were split in a way that was not linked to education cost-sharing, especially in compulsory education. Thus, there was no incentive for the "collaborative regime" recommended by the Brazilian Constitution. As a result, the constitutional obligation to "apply at least 25 per cent of tax revenues, including those from transfers, to maintaining and developing education" was not realized, creating disparities between state and municipal schools.

At one extreme, there were affluent municipalities whose schools had few pupils because state institutions provided education and, at the other extreme, poor municipalities that had many pupils and insufficient funds for even a minimum level of education quality.

A major educational reform implemented in Brazil since 1998 has redefined the way that public resources are allocated to primary schools. FUNDEF (The National Fund for the Development of Primary Education) aims to improve the equitable distribution of public funds for basic education. The Fund redistributes resources for primary education services provided by states and municipalities based on the number of pupils served. It guarantees a minimum standard expenditure per pupil in order to provide greater equity in the distribution of public funds and thus reduce regional inequalities.

During its first year of operation, FUNDEF redistributed roughly PPP$US10.6 billion. The states, which in 1998 were responsible for 59 per cent of pupils in public primary schools, received 62 per cent of these resources. The municipalities, which provided for 41 per cent of pupils, received 38 per cent. This contributed to a more balanced division of resources between states and municipalities.

The municipal systems were the greatest beneficiaries, receiving significant new resources that allowed for an increase in per-pupil expenditure. Some 49 per cent of the 5,506 municipalities which are responsible for 11 million primary pupils received additional funding. It is important to note that 39 per cent of municipalities lacked sufficient resources to meet the R$315 minimum per-pupil expenditure target. In 17 per cent of municipalities, expenditure was less than one third of the target level. With the resources from FUNDEF, per-pupil expenditure increased on average by 129 per cent. This also led to a rise in expenditure per pupil at pre-primary and secondary levels since the injection of additional funds for primary education freed up funding for use at other levels of education.

Source. WEI Quick Survey, 2002.

small amount of transfers from the central government. Thus, the initial sources of the transferred funds are regional and central governments.

Intergovernmental transfers seek to address fiscal imbalances.

To a large extent, spending at the regional or local level is more the result of central government subsidies than extensive revenue generation. Intergovernmental transfers are usually meant to address vertical fiscal imbalances, i.e. to ensure that government revenue matches expenditure at

the regional or local level. Another aim of transfers is to address horizontal fiscal imbalances or to even out differences in expenditure across regions or municipalities. This latter aim is based on the redistribution of state funds in order to ensure inter- and intra-regional equity goals. This policy aim is found in several WEI countries, most notably in Brazil (see Box 2.2). It represents an effort to equalize the capacity of municipal governments to provide a minimum level of educational services. Transfers are often linked to particular measures of need such as the number of students or the socio-economic characteristics of a region.

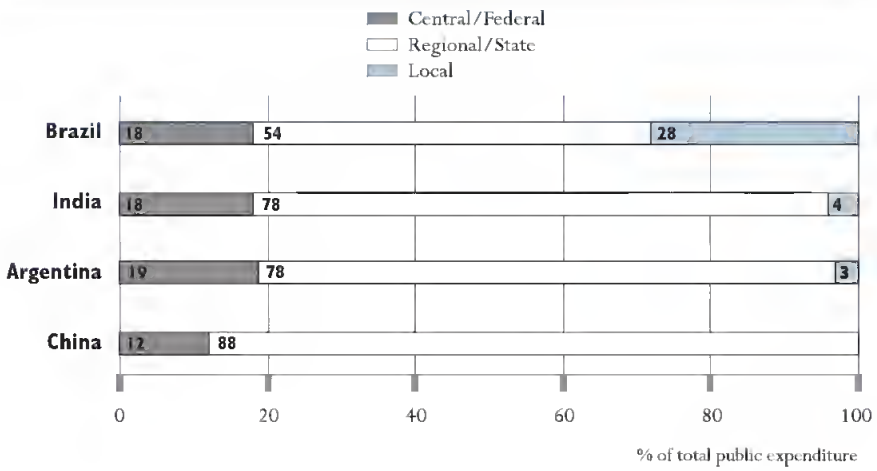
Many WEI governments rely on intergovernmental transfers to fund education.

Intergovernmental transfers for education, from central and regional levels, are also found in Argentina, Brazil, Chile, Indonesia and Paraguay, but not in Jamaica, Peru, Malaysia or the Philippines. Here, intergovernmental transfers are those transfers designated for education from one level of government to another. General purpose transfers are not included even when they may provide funds that regional or local authorities can draw on for education.

Regional and local governments are also important sources of funding in their own right in federal WEI states.

As Figure 2.8 shows, regional and local governments are important sources of funding for education. In Brazil, most public funding for education originates at the local and regional/state levels compared to 18 per cent at the central (federal) government level. The central government share is roughly similar to those of Argentina, China and India, but the large proportion of local funding is quite unusual among WEI countries.

Figure 2.8
Distribution of public education expenditure by initial source of funds, 1999



Note: For country-specific notes, please refer to tables in Annex A4.
Source: OECD/UNESCO WEI.

Regional and local governments are more likely to fund primary than tertiary education.

As noted earlier, the division of government responsibilities for finance can differ by education level. Regional and often local governments play a larger role in generating revenues for spending on pre-primary and primary educational institutions. This is the case with regional authorities in Argentina, Indonesia and Tunisia and for local governments in Brazil and the Philippines. Responsibilities for funding secondary schools are also more likely to be found at the regional or local level, while at the tertiary level they are typically under the authority of the central government.

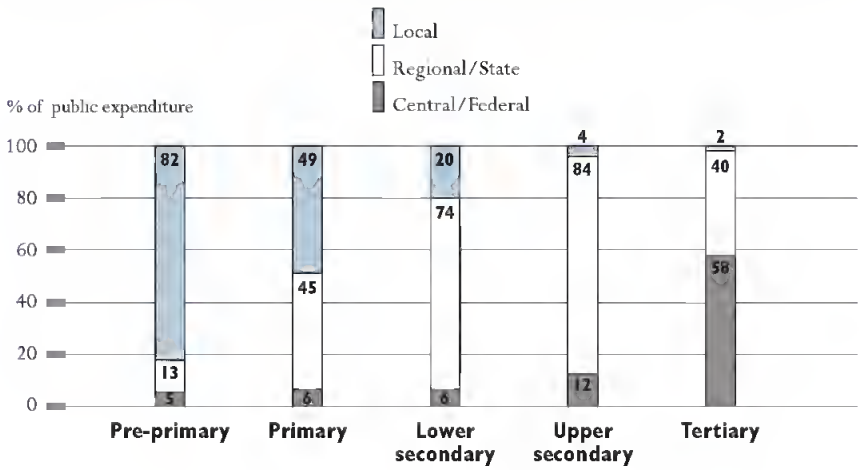
In a federal state like Brazil, the proportion of central government expenditure on education is small except at the tertiary level.

Figure 2.9 shows how the initial source of expenditure changes by education level. In Brazil, the general increase in fiscal responsibility at increasingly higher levels of the education system may be illustrative of a general pattern among other federal WEI countries. Almost all expenditure for pre-primary and the largest share of funding for primary are at the local level. The regional level is the main initial source of funding for secondary education. For tertiary education, the majority of public funding originates at the central level, although a substantial proportion is initiated at the regional level.

Public funding for the private sector

As noted earlier, public expenditure on education is not limited to public schools. Government support is directed towards the private sector in two ways. Firstly, as direct support for private educational institutions and secondly, through support for educational institutions that is channelled through individuals, households and other private entities.

Figure 2.9
Distribution of public education expenditure by initial source of funds and level of education in Brazil, 1999



Source: OECD/UNESCO WEI.

In some WEI countries, public support is vital to the operation of private schooling.

The most common rationale for direct public support for private education is related to meeting excess demand for education. Examples of community schools in China or Zimbabwe or the subcontracting of educational services from private schools in the Philippines are examples of public-private partnerships. As the next section shows, government-dependent private schools can represent 3–57 per cent of upper secondary enrolment and up to 73 per cent of tertiary enrolment in WEI countries.

In all WEI countries, governments provide funding to individuals for education costs.

Governments also provide funds to students, households and other private entities through grants and loans targeted by merit and/or need. The main rationale is to help support educational provision and promote equitable access to programmes, particularly at higher levels of the educational system. Typically, the funding goes towards tuition fees and living costs at the tertiary level and, to a lesser degree, at the secondary level.

The mechanisms used to channel funds to private schools and the private sector range from direct expenditure through capitation grants, revenue-sharing programmes and subcontracting to indirect funding through school vouchers, stipends, grants and loans (See Box 2.3).

Box 2.3

Mechanisms for channelling public funds to the private sector

One important goal of the mechanisms listed here is to improve the equitable distribution of educational opportunities and learning outcomes. Another is to improve educational efficiency through competition for resources and greater local control. These mechanisms are often used, as is the case in several WEI countries, to promote greater utilization of demand-side financing of education.

In theory, demand-side financing refers to the transfer of public resources (e.g. in the form of a voucher) to the school or community level where the decision is made upon which educational institution to spend it. Such a mechanism, it is argued, promotes choice among students and households and creates competition among schools, thus, improving learning outcomes. However, it has been noted that *real* choice is often constrained by circumstances, especially outside large urban areas.

The wide array of mechanisms used in WEI countries for financing education are presented in Table 2.4. While this section of the report focuses on direct public funding, grants/scholarships and student loans, there are other tools for education finance: *A community grant* is a grant given to a group of students and linked to attendance in a community-created institution. The amount of money is typically based on the number of students. *Targeted bursaries* are transfers direct to schools, municipalities or provinces and are earmarked for specific purposes such as improving the curriculum or increasing school access for minority, indigenous or poor children. *A voucher* is a

payment that a public entity gives directly to students to be used at the school of their choice. The Chilean experience with vouchers is described in greater detail in the WEI Report No. 2 (UIS/OECD, 2001). Finally, *social funds* basically solicit proposals for financial support of education from public, private or community groups.

Table 2.4
Mechanisms for public financing of education in WEI countries

Mechanism	Goal/s	Constraint/s	Country
Direct public funding of private schools	Promote equity.	Schools may increase fee or charge other fees.	Argentina, Brazil, Chile, Paraguay, Philippines.
Community grants/ community financing	Promote equity. Improve management capacity.	Concerns about sustainability.	Brazil, China, Zimbabwe.
Grants/scholarships	Promote equity.	Targeting costs and difficulties. School may increase fee or charge other fees.	Brazil, Chile, China, Jordan, Malaysia, Zimbabwe.
Student loans	Promote equity and/ or cost recovery.	Difficult to target, difficult to recover, often acts as a subsidy.	Brazil, Chile, Jamaica, Malaysia, Philippines, Thailand, Zimbabwe.
Targeted bursaries/ school improvement funds	Promote access and equity. Support local decision-making.	May not reach target population. Social stratification. May be disincentive to schools.	Chile, China, India, Paraguay.
Vouchers	Promote choice, equity and education quality.	May result in selection practices. Socially divisive.	Chile.
Matching grants/ social funds	Promote equity. Improve management capacity.	May have negative impact on poor students.	Brazil, China, India, Philippines.

Source: Patrinos and Ariasingam, 1997.

Public funding for private educational institutions

For most WEI countries, public expenditure on education largely means spending directed towards public schools. However, in a number of cases, as in OECD countries (see Box 2.4), the government provides substantial support to government-dependent private schools that would, in all likelihood, be unable to function without such funding.

In addition to supporting government-dependent private schools, many governments also channel spending to independent private schools at the tertiary level. At lower levels of education, where independent private institutions are less common, funding is primarily for government-dependent institutions.

Box 2.4

Public support for private schooling in OECD countries

It is quite common for countries in the OECD to finance both public schools and private/religious schools with public funds, and they have done so for many years. The proportion of public expenditure used to subsidize private education amounts to 4 per cent in the United States, 7 per cent in Switzerland, 10 per cent in Australia and almost 12 per cent in France. In Belgium and the Netherlands, private education is entirely publicly funded; thus, the proportion of funding targeted to private-school students approximates the proportion of private-school students in the student population. In return for the funding, private and religious schools in some countries agree to honour government standards in matters of curriculum, class size and the like, and their students must pass the same national examinations as their public-school peers.

Source: National Centre for Education Statistics, 2001.

Most public spending in WEI countries consists of direct funding of public schools.

Figure 2.10 shows that at the primary and secondary level most government funds end up at public schools. In more than half of the 13 WEI countries reporting data, more than 95 per cent of total public education expenditure is direct funding of the public school system. In the remaining countries, there is both direct public funding of private schools and a small amount of indirect funding of educational institutions through households and other private entities whereby public funds may end up at either public or private institutions.

Governments in Chile and India are the biggest supporters of non-state education provision.

Among WEI countries, the governments that support the non-state sector to the greatest extent are Chile and India. Overall, Chile devotes the largest share of direct public funding to private schools, representing more than one third of total public expenditure on primary and secondary education. More than 90 per cent of this amount goes to government-dependent schools and the remainder to independent private schools at the tertiary level. Of total direct public funding of private schools, the greatest share goes to primary schools.

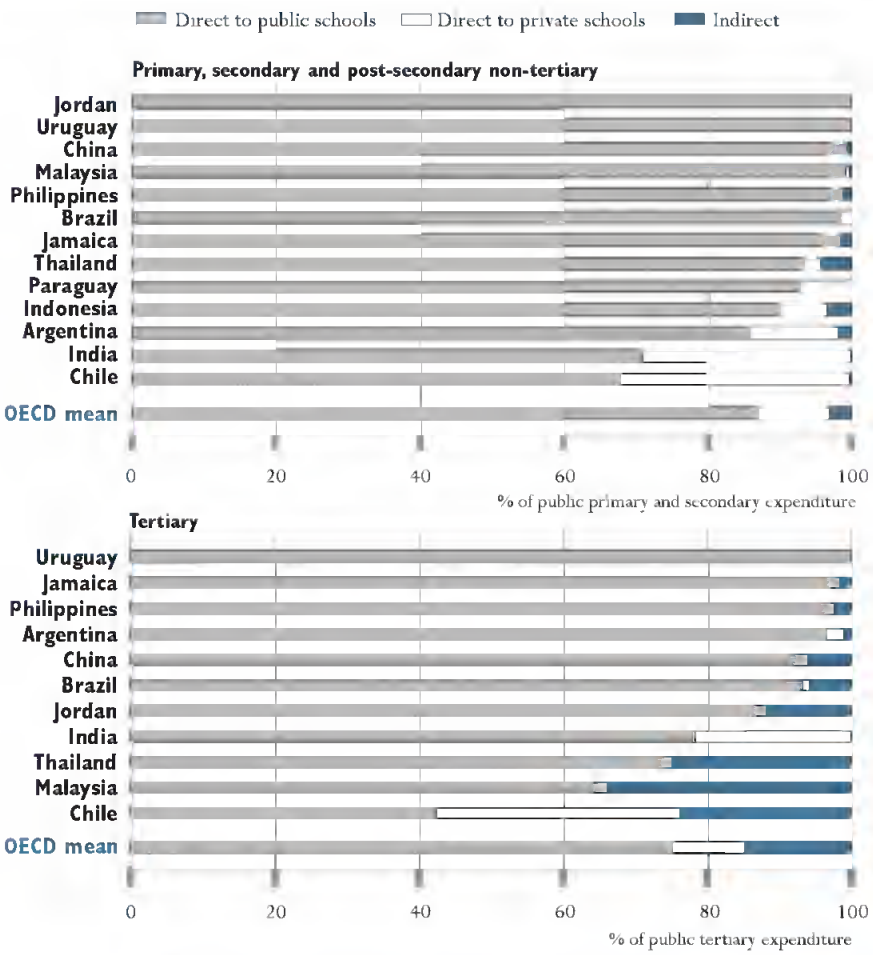
A voucher payment system has been in place in Chile for several decades.

Since 1980, the education system in Chile has provided financial resources to public and government-dependent private schools through a voucher system (OECD, 2000). Voucher payments are based on the number of students attending school, the time students spend at school, the geographic area in which the school is located and the level of education. Subsidies per student are the same for both public and government-dependent schools. Since 1994, both types of schools have been allowed to generate revenues on their own initiative. Both can charge tuition while receiving a subsidy but the amount of the subsidy will depend on the average fees charged to students. The higher the fees, the lower the subsidy.

In India, just less than one third of total direct education expenditure goes to support private institutions. This expenditure supports provision education to 31 million students enrolled in government-dependent primary and secondary schools. The government supports educational institutions founded by linguistic minorities, social and welfare trusts, and other individuals and organizations. 'Recognized' schools meet the rules and standards prescribed by respective state governments (Aggarwal, 2001).

Figure 2.10 also shows that direct public support for private schools is more common at primary and secondary levels than at tertiary. Chile and India still provide a significant proportion of direct public funding to private institutions but, including them, only four WEI governments provide direct public support to private tertiary institutions.

Figure 2.10
Public education expenditure by type and level of education, 1999



Note: For country-specific notes, please refer to Table 15 in Annex A4.
Source: OECD/UNESCO WEI.

Box 2.5

Public and private partnerships in the Philippines

In the Philippines, the Fund for Assistance to Private Education (FAPE) administers education projects that facilitate public support for private schools. Some of the Fund's work has focused on public and private partnerships in providing education. In both areas, the aim is to address unmet demand for secondary schooling and to enable private provision through tuition subsidies.

The Educational Service Contracting (ESC) scheme enables secondary students in overcrowded public schools to enrol in private schools. The state pays tuition fees to the private institution at a rate not exceeding the cost per student in public schools. More than 200,000 secondary students were supported by this scheme in 1998/99.

The Tuition Fee Supplement (TFS) programme allows students enrolled at private schools where tuition falls below a state-set limit to receive a tuition fee supplement to offset tuition increases. The number of beneficiaries of this programme has declined, partly due to tuition increases that have put most fees beyond the state ceiling which has been in effect, unchanged, since 1996.

Source. Arcelo, 2000.

Figure 2.11 shows that the reported share of public expenditure spent on private schools is lower than the share of students enrolled in private institutions, whether that share is high or low. More commonly, direct funding of private schools represents less than 5 per cent of public expenditure, particularly in countries with lower shares of enrolment in private institutions. Education systems where private schools receive significant support from public funding are more likely to represent a larger share of students, as in the case of upper secondary education.

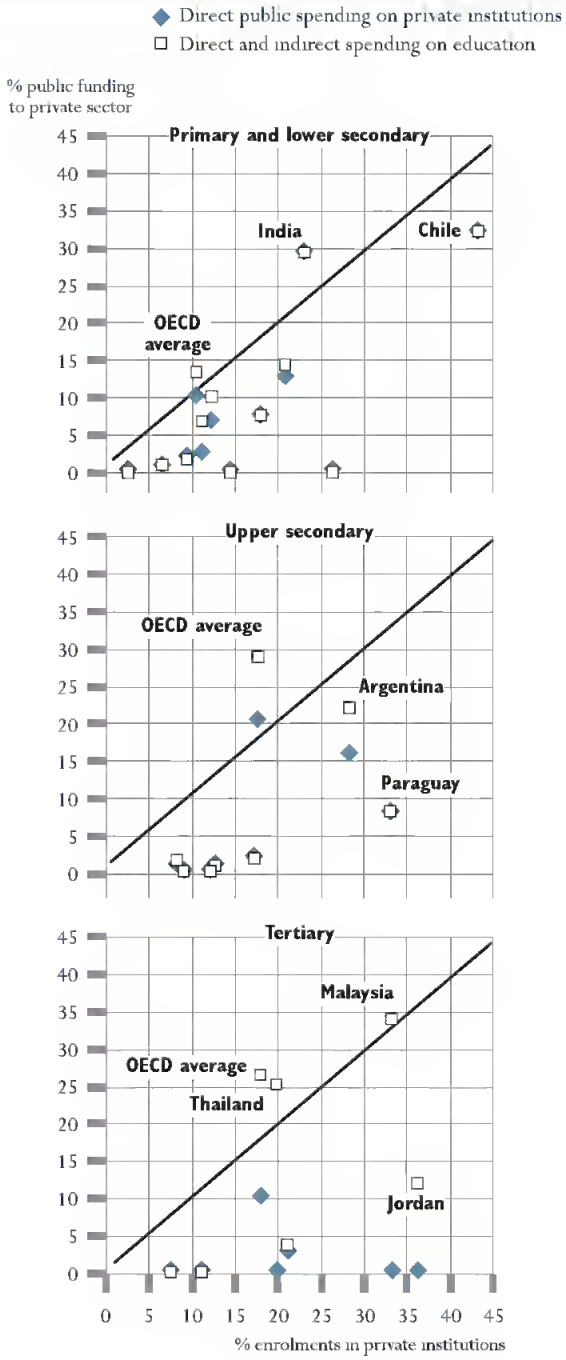
Public funds for private sector and educational institutions

One way that public resources indirectly reach educational institutions is through support directed to students, households and private entities. Most WEI countries provide some type of grant, scholarship or loan programme to students enrolled in secondary programmes and all countries provide them to students pursuing tertiary-level studies (see Figure 2.12).

Grants and loans are mechanisms used in all WEI countries to help support students at the tertiary level.

Grants are typically provided to students at both secondary and tertiary levels and are meant to assist students with living costs or, as scholarships, to reward academic merit. Loans allow students to delay payments for attending tertiary education with the intent of repaying the loan from enhanced earning potential and future income. The objectives of grant and loan schemes are to facilitate cost recovery and to provide financial assistance where tuition and other fees can potentially exclude students, especially those from low-income households.

Figure 2.11
Proportion of private enrolment and public transfers to private schools and the private sector, 1999



Note: For country specific notes, please refer to Tables 15 and 23 in Annex A4.
Source: OECD/UNESCO WEI.

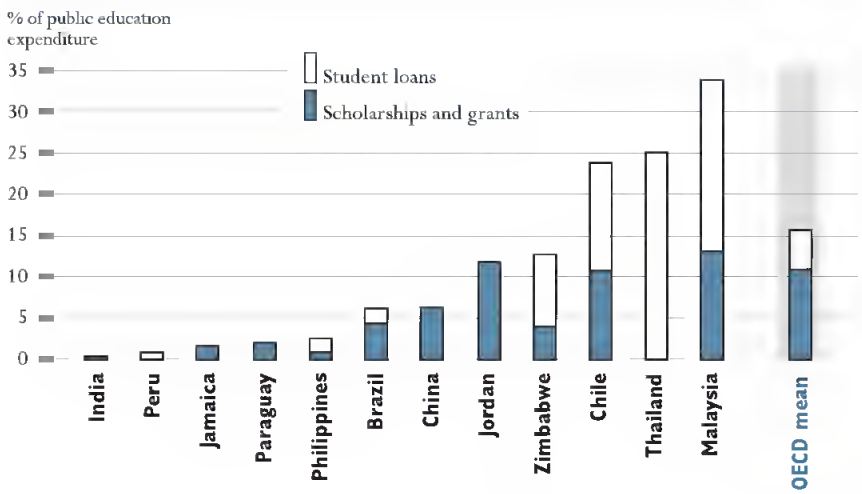
Grants to students represent a significant share of public expenditure on education in Malaysia, Chile and Jordan.

Grants include stipends or cash transfers given to students or their households to pay for school tuition. They may also include expenditure on other education-related goods and services such as textbooks and learning materials, transportation and meals. They also include targeted bursaries that are paid directly to regional/local authorities or schools for specific purposes such as expanding school access and are not transferred through students and households. As shown in Figure 2.12, grants represent the largest share of public education expenditure in Malaysia (13 per cent), Chile (11 per cent) and Jordan (11 per cent), all roughly the same as the OECD country average (12 per cent).

Grants to facilitate participation in secondary education are found in a number of WEI countries...

Several WEI countries have programmes aimed at enabling participation in secondary education. After the currency crisis in Indonesia in 1997, a programme was launched to help families facing economic hardship in order to keep students from dropping out of school. About 20 per cent of all primary and secondary students currently benefit from programme transfers aimed at low-income households. The programme will be phased out in the near future. In Malaysia there are several types of grants/scholarships at the upper secondary level, including an allowance for vocational-technical secondary enrolment and a merit-based scholarship that covers fees for general secondary. In Zimbabwe, the government has implemented a programme called Basic Education Assistance through which pupils from poor families receive government assistance to cover fee payments at ISCED Levels 1, 2 and 3.

Figure 2.12
Public subsidies for education as a percentage of public education expenditure, 1999



Note: For country specific notes, please refer to Table 16 in Annex A4.
Source: OECD/UNESCO WEI.

... but, overall, are more common at the tertiary level.

There are many examples among WEI countries of stipend and grant programmes designed to improve equity in access to tertiary level education. However, there are no significant grant or scholarships for students at this level in Argentina, Peru, Uruguay and India. In Chile, where the proportion of education expenditure is comparatively higher than in other WEI countries, there are several upper secondary education grants that benefit low-income students and finance mainly cost-of-living expenses.

In countries with comparatively low levels of education funding, the size of grant amounts is often very low. In Indonesia, the total amount of public subsidies given to students and households at the tertiary level accounts for less than 1 per cent of the public budget on tertiary education. While the government provides scholarships to about 210,000 students (10 per cent of total enrolment), the currency amounts are almost negligible (60,000 to 75,000 Rupiah per student).

In Jamaica, despite a wide array of grants, the total amount of spending on grants is also not large. The state awards scholarships to primary students who excel in exams to cover fees at ISCED Level 2. At ISCED Levels 2 and 3, public schools charge fees and where grants are given they are based on income. There are also grants for low-income families to cover exam fees at ISCED Level 3. There is financial assistance for students to pay fees at independent private schools and for boarding at some secondary schools. At ISCED Level 4A, there is financial aid to students who cannot afford to pay for their advanced-level (A-level) exams.

Many student loan schemes have been difficult to sustain...

Student loan schemes are found in many countries and the aims of such programmes often differ. Two common goals are to enable greater cost recovery and limit public expenditure or to promote educational participation among students from low-income households. Few student-loan schemes have proved to be financially viable, particularly in developing countries where loan recovery rates in the early 1990s were typically less than 50 per cent (Albrecht and Ziderman, 1992). Such programmes thus represent a 'hidden' subsidy provided by the state through low interest rates, leniency in repayment or default of repayment (Salmi, 1999).

... and, in Indonesia and the Philippines, have ground to a halt.

In fact, student-loan schemes were curtailed in several WEI countries during the 1990s, including Indonesia and the Philippines, because the programmes were not fiscally sustainable. Loan programmes were stopped in Indonesia in 1997 partly due to the high number of loan defaults.

WEI countries investing the most in student loan schemes, in relative terms, are Malaysia, Chile and Thailand.

In most WEI countries, student loan schemes are run by public agencies. Most are mortgage loans, meaning that there is a fixed repayment rate and term. The recipient educational institutions are mostly public institutions but, in some cases, include private institutions. The countries providing the

highest levels of student-loan funding at the tertiary level of education are Malaysia, Chile and Thailand. The countries investing the least are Argentina, Peru and Uruguay. There are no government-sponsored student loan schemes in Paraguay and the Russian Federation at any education level.

Among WEI countries, there is a range of practices aimed at achieving more equitable access:

- In Malaysia, assistance takes the form of long-term low-interest loans to students who have secured places in tertiary institutions but lack the economic resources necessary for higher education.
- In Brazil, a nationwide student loans programme (*FIES-Financiamento Estudantil*) was launched in 1999 for undergraduate students enrolled in private institutions, mainly for disadvantaged students who cannot afford student taxes and fees. The programme has reached 152,000 students.
- The student loan scheme in Jamaica provides financial aid to needy students attending public and private tertiary institutions and is administered by a Student Loan Bureau. Some have noted that the system, funded by the World Bank, has been hampered by problems, particularly in terms of hitting the target population (Salmi, 1999).
- In Chile, the financing system for tertiary education provides loans to students from low-income families through public and government-dependent universities. CORFO, a government agency, provides resources and benefits to commercial banks so that they, in turn, lend money to students.

There are a range of novel approaches to using state transfers as incentives to keep young people in school in WEI countries.

Finally, there are state transfers to the private sector that are targeted at improving education participation among the poor. Minimum-income schemes provide a way to target public expenditure at the roots of school drop-out and child labour by providing incentives and lowering the opportunity costs of staying in school (ILO/UNCTAD, 2001). The *bolsa-escola* programme, operated in selected sites in Brazil, is a scholarship programme aimed at enabling economically disadvantaged students to complete their schooling. It guarantees a minimum wage to every low-income household contingent upon enrolment of any children of primary-school age (7–14 years old). Additional incentives are linked to regular school attendance and successful completion (Vawda, 2001). Malaysia provides tax reductions for dependent children under age 18 and for children over 18 who are enrolled in education full time.

3 THE PRIVATE SECTOR AS A PROVIDER AND FUNDER OF EDUCATION

This section examines the role of the private sector in education, both as a provider of education and as a funder of education. Its importance, in both respects, is greater than that found in OECD countries.

The private sector plays a more important role in education in WEI countries than in the OECD.

As noted at the outset of this chapter, the dichotomy between public and private schools is often presented in an over-simplified way that fails to capture the growing diversity among schools and how they are managed. This section surveys the range of characteristics of schools that comprise non-state provision of education in WEI countries and presents data on levels of participation relative to state schools. The level of private education provision differs widely by country and education level.

In addition, the flow of financial resources from the private sector to educational institutions, as represented in the model shown in Figure 2.6, is an important one in most WEI countries. Measures of public investment give only a partial picture of national investment in education, especially for countries where levels of private investment are high. Measures of private expenditure help to provide a more complete picture that allows comparison not only of the respective funding roles of public and private sectors but also provides a starting point to examine issues like costs, access and participation.

However, private expenditure remains very difficult to measure and to compare across countries. Individual countries provide estimates of the amount spent by households on education but they employ different definitions of 'education costs' and a variety of data sources, ranging from national accounts to household and school surveys. This section sets out a definition for comparing costs across countries, looks at the types of costs typically faced by households and presents indicators of household expenditure on educational institutions.

The private sector as an education provider

Often the term 'private sector' is used to imply private as opposed to public funding. However, the sources of funding for public and private educational institutions have become increasingly mixed. In most WEI countries, a proportion of public funding goes towards private schools and, at the same time, there are significant private contributions to public schools. Other types of distinctions between public and private can be more relevant than sources of funding, including ownership of property and buildings, and control over curriculum, admissions, teacher appointments and payment, and supplies.

The first criterion for distinguishing public and private schools is governance…

Here, the terms 'public' and 'private' are used to differentiate between types of school governance. An institution is classified as private if it is controlled and managed by a non-governmental organization (e.g. religious group, association, enterprise) or if its governing board consists mainly of members not selected by a public agency, regardless of its funding sources. Even if a school is managed privately, governments often require that institutions apply for licences in order to provide educational services that comply with the national curriculum and the norms and standards required of public schools.

...and the second is sources of funding.

In addition, it is possible to further distinguish between different types of private institutions. Those that receive the majority of their funding from public sources are referred to as *government-dependent private institutions* and those that receive less than half of their core funding from the state are called *independent private institutions*.

Independent private schools at the primary and secondary levels are found in all WEI countries except Zimbabwe with government-dependent private schools at these levels found in about half the countries.

Table 2.5 shows the prevalence of each type of private institution by level of education among WEI countries. Of the 17 countries presented, eight have government-dependent private schools at both the primary and secondary levels. This includes both the WEI country with the highest GDP per capita (Argentina) and the lowest (India). All countries have some independent private primary and secondary schools except for Zimbabwe. At the tertiary level (Type A programmes), Chile and Zimbabwe are the only two countries to have government-supported private programmes, while Egypt, Malaysia and Tunisia have only public-sector education provision at this level.

Private schools have emerged to meet demand for different types of education services.

Private schooling has arisen as a response to different contexts (James, 1991). One of the more common contexts is where private schools meet excess demand due to shortfalls in public-sector supply. Private schools have also emerged in response to differentiated demand, i.e. offering specific

Table 2.5
Private institutions by type and level of education

	Primary		Secondary		Tertiary (Type A)	
	Government dependent	Independent private	Government dependent	Independent private	Government dependent	Independent private
Argentina	♦	♦	♦	♦		♦
Brazil		♦		♦		♦
Chile	♦	♦	♦	♦	♦	♦
Egypt	♦	♦	♦	♦		
India	♦	♦	♦	♦		♦
Indonesia		♦		♦		♦
Jamaica		♦		♦		♦
Jordan		♦		♦		♦
Malaysia		♦		♦		
Paraguay	♦	♦	♦	♦		♦
Peru	♦	♦	♦	♦		♦
Philippines		♦		♦		♦
Russian Fed.		♦		♦		♦
Thailand	♦	♦	♦	♦		♦
Tunisia		♦		♦		
Uruguay		♦		♦		♦
Zimbabwe	♦		♦		♦	

Source: OECD/UNESCO WEI.

educational opportunities that are not provided by the state. These range from elite academies to schools with religious content and those that cater to drop-outs from public schools. Thus, across WEI countries, the term 'private school' is interpreted in many different ways.

Enrolment in private primary school is not uncommon in WEI countries, accounting for about 1 in 6 students...

The distribution of enrolment across types of educational institutions reflects the relative importance of the private sector in educational provision. In nine out of 16 WEI countries, the proportion of private primary enrolment exceeds 10 per cent (see Figure 2.13). Zimbabwe has the largest proportion of private primary enrolment with almost 9 in 10 children enrolled in government-dependent primary schools that are managed at the community level. The smallest proportion is found in the Russian Federation (0.4 per cent) where less than a decade ago private schools were illegal.

...compared to 1 in 10 in OECD countries.

In comparison to OECD countries, WEI countries have a somewhat higher proportion of primary students enrolled in the private sector. The majority of OECD countries have on average, about 1 in 10 pupils enrolled in schools at the primary level (see Table 23 in Annex A4). At the secondary level, private enrolments are more prevalent and the share found in WEI countries is closer to that found in OECD countries. Nonetheless, at each educational level, almost every WEI country exceeds the OECD average share for independent private enrolment.

Government-dependent community schools are the backbone of the education system in Zimbabwe and China.

As the case of Zimbabwe illustrates, community schools play a very large role in government strategies to widen educational opportunities. Community schools are a type of government-dependent private school that is found in several WEI countries. Generally, they represent an attempt to meet excess demand for basic education and are operated with the support and active involvement of the local community. The government pays teachers' salaries and provides a small per-capita grant while local authorities finance costs above that as well as the cost of school construction. While widespread in Zimbabwe, more typically, they are located in rural and remote locations which have traditionally been under-served.

Although it is difficult to disaggregate enrolment data in China, community or 'people-run' schools play a big role in the education system. These schools arose in response to the huge gap between supply and demand in rural areas and were originally managed and funded entirely by communities (Tsang, 2000). These numerous and widespread schools now receive government assistance and are part of the mainstream education system (Bray, 1996).

Religious schools play a considerable role in education provision in Indonesia, the Philippines and Paraguay.

Religious schools are another alternative to public schools or licensed private schools and are found in several WEI countries. For example, in Malaysia and Indonesia religious schools called *madrassas* offer primary- and secondary-level education with an emphasis on Islamic content. Most

are not licensed or supervised by the state, although a few public religious schools exist under the Ministry of Religious Affairs in Indonesia. *Madrassas* traditionally serve as an institution that grooms civil servants and judicial officials as well as religious functionaries. They can serve as a mechanism for the poor to move up in society (ul Haq and Haq, 1998).

In Malaysia, enrolment in religious schools represents a small share of the total, about 1 per cent of enrolment at ISCED Levels 1–3. By contrast, enrolment in Koranic schools makes up 7 per cent of all primary students, 28 per cent of lower secondary students and 53 per cent of upper secondary students in Indonesia. Private religious schools are mainly financed by student fees and, to a lesser extent, by contributions from religious communities and associations.

Similarly, in the Philippines and several Latin American countries, schools run by the Catholic church are widespread. In the Philippines, 29 per cent of private primary schools (accounting for 8 per cent of total enrolment) and about 42 per cent of private secondary schools are operated by religious orders of the Catholic Church or by the Association of Christian Schools and Colleges. At the same time, trends show that the proportion of private enrolment has been steadily declining. The share of private secondary enrolment has decreased from 62 per cent in the mid-1960s to 24 per cent currently (ADB, 1999). Where the public system has expanded to meet a greater part of demand, the role of the private sector has diminished.

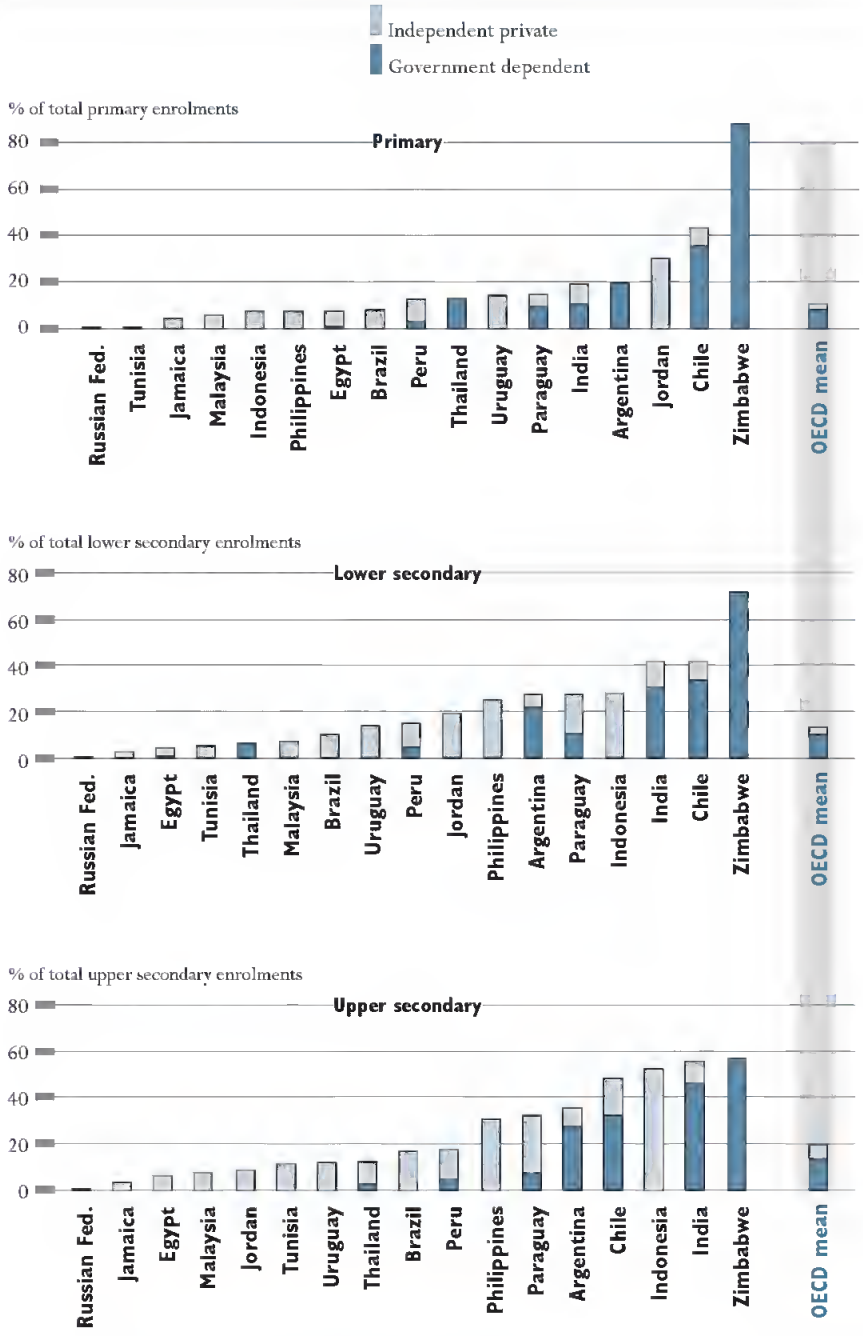
WEI countries with the highest share of private upper secondary enrolment are also those with the lowest participation rates.

The overall proportion of private sector enrolment is significantly higher at the secondary level of education than at the primary level in India, Indonesia, Paraguay and the Philippines. To some extent, high levels of private sector provision may be a sign of less-developed public education systems. The three WEI countries with the highest proportion of private enrolment in upper secondary have the lowest rates of participation.

However, high levels of participation in private education can also be an attribute of educational systems. Indeed, as lower secondary school often corresponds to the end of compulsory schooling, its profile resembles primary rather than upper secondary schools. Figure 2.13 shows that the countries at the high and low ends of the lower secondary continuum are the same ones as at primary. The Russian Federation and Tunisia have among the lowest shares of private enrolment, while Zimbabwe and Chile have among the highest private lower secondary enrolment.

In comparison with lower secondary, upper secondary programmes are typically more diverse and include more specialized types of training, often including enterprise-based vocational training. With the different types of school involved at this level, the patterns of private enrolment become more complex.

Figure 2.13
Proportion of enrolments by type of institution, 1999



Note: For country specific notes, please refer to Table 23 in Annex A4.
Source: OECD/UNESCO WEI.

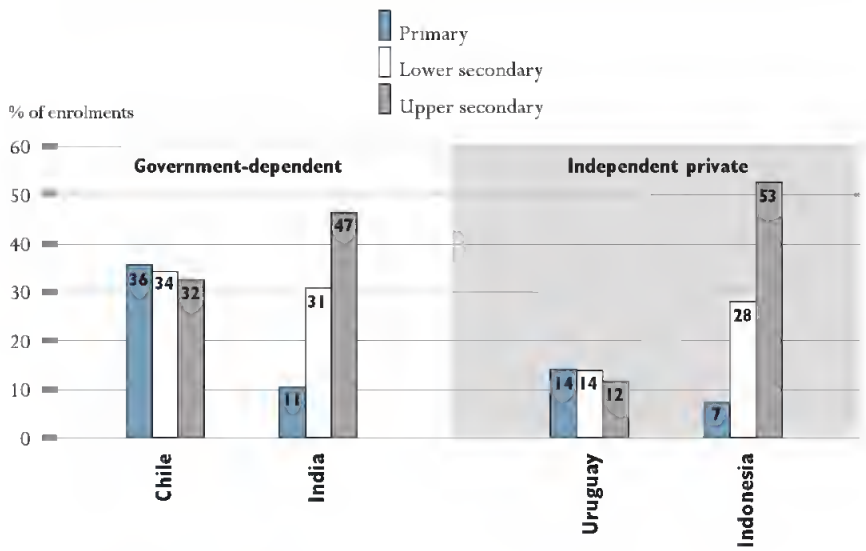
Private enrolment does not systematically increase by education level.

The increase in the share of private enrolment at higher levels of education is however, not systematic (see Figure 2.14). For example, Chile and India share a similar proportion of private enrolment – 30–35 per cent – in government-dependent lower secondary schools. However, in Chile, the proportion of private institutions is very close across education levels while, in India, the share grows sharply from 11 per cent at primary to 47 per cent at upper secondary. The same is true of enrolment in independent private schools in Uruguay and Indonesia. The enrolment share is relatively evenly distributed across levels in Uruguay, while increasing rapidly in Indonesia from 7 per cent in primary to more than half of all upper secondary enrolments.

Tertiary education has a much different appearance than other levels of education, since government-dependent institutions are practically non-existent in WEI countries, with the exception of Chile, Zimbabwe and, to a lesser extent, Paraguay (see Figure 2.15). A sizeable share of government-dependent private enrolment falls into tertiary Type A programmes in the former two countries and a somewhat smaller share (less than 10 per cent) in Type B programmes. Aside from these countries, private tertiary institutions operate with less than half of their core funding provided by the state in WEI countries.

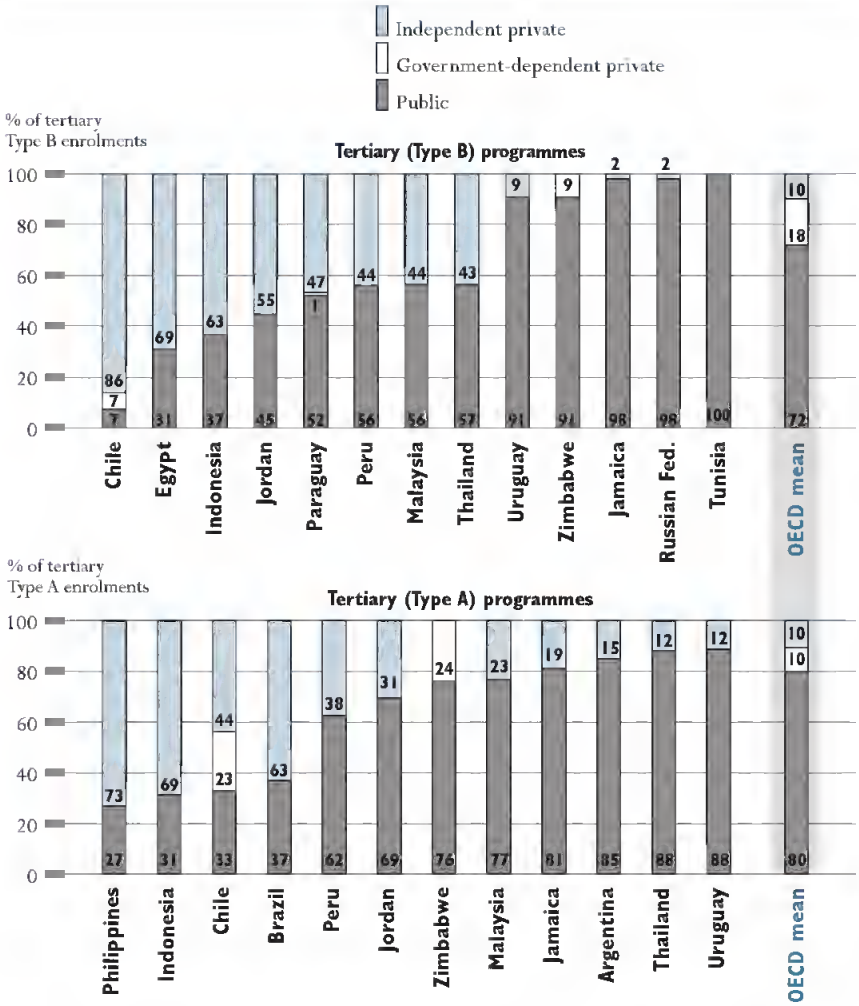
Therefore, the rest of private enrolment, often a considerable amount, is found in independent private institutions. In ISCED Level 5A programmes, almost 3 in 4 students are enrolled in independent private institutions in

Figure 2.14
Proportion of enrolment by type of institution and level, 1999



Note: For country specific notes, please refer to Table 23 in Annex A4.
Source: OECD/UNESCO WEI.

Figure 2.15
Proportion of tertiary enrolment by type and programme, 1999



Note: For country specific notes, please refer to Table 28 in Annex A4.
Source: OECD/UNESCO WEI.

the Philippines and almost as many in Indonesia. The proportion of private enrolment at ISCED Level 5A is also large in Brazil (63 per cent). All WEI countries with independent private provision have a higher proportion of students enrolled in these programmes than the OECD average of 10 per cent. This is not the case in ISCED 5B programmes, where the range in values among WEI countries is greater, from no students enrolled in private ISCED 5B programmes in Tunisia to 86 per cent of 5B enrolment in Chile.

An intriguing question concerns the relationship between the management of educational institutions and the quality of their learning outcomes.

International student assessments, available for Latin American countries, provide some insight into the differences between public and private schools in terms of student achievement and student composition in one WEI region. A 1999 assessment of primary pupils, the *Primer Estudio Internacional Comparativo* (PEIC), assessed language and mathematics skills among Grade 4 and 5 pupils in 12 countries, including five WEI countries – Argentina, Brazil, Chile, Paraguay and Peru.

One assessment of Grade 4 and 5 students shows that public-private differences relate more to school resources than family background...

Analyses of the PEIC results show that there are significant differences between the achievement scores of students in public and private schools, but not as great as the differences between urban and rural schools. According to the study, disparities between student scores in public and private schools are more strongly related to school resources than to students' family background. While school policies and practices contribute to school effectiveness, little difference is cited between public and private schools in this area. Analyses of the results do not support significant effects associated with public and private schools and descriptive analyses indicate that private schooling contributes substantially to the segregation of students from different socio-economic backgrounds (Willms and Somers, 2001).

...while another study of 15-year-olds shows that public-private differences are linked to both family background and achievement scores.

Another international assessment, this one testing secondary school-age students, the Programme for International Student Assessment (PISA), was conducted in 32 countries in 2000. Brazil and the Russian Federation were the only WEI countries to participate in this wave of the study which measures reading, science and mathematics skills among 15-year-olds. As with PEIC, the PISA study shows that students who attended private schools at the time of the assessment generally perform better than their peers in public schools (OECD, 2001).

In Brazil, where 11 per cent of 15-year-olds in the sample attend independent private schools, the achievement scores favour private school students, to the same degree as in OECD countries like Ireland, Mexico, Greece and Spain. However, this advantage is linked to the composition of student intake in each type of school. Like the earlier example presented for primary school students, students in private secondary schools come from households with higher socio-economic status than public school students in every country studied (OECD, 2001).

The private sector as a funder of education

In light of public budget constraints, it is often argued that efforts to expand education systems can only move ahead with greater cost-sharing and the wider implementation of 'user fees' for educational services (Lockheed and Jimenez, 1994; Patrinos, 1999). It is also often argued that, from the

perspective of equity, greater cost-recovery should be sought at higher levels of education where individual returns are the highest.

It has been observed in most countries, for example, that a greater responsibility for the costs for tertiary education has been placed on private sources of funding (Skilbeck, 1998; Johnstone and Shroff-Mehta, 2000). This approach, which may enable governments to focus greater investment in basic education, may also come at the expense of equitable access for post-secondary education among poorer households and individuals.

Extending user fees for education as a means of cost-recovery can be seen as both a tool for and against equity.

Concerns have been raised that extending user fees in the education system creates barriers to participation and undermines a commitment to equality of educational opportunity, a commitment that is also important to national economic and social goals (Bray, 1996; Buckland, 1999; Watkins, 2000). Maintaining the balance between these two positions is often a difficult challenge, not only for WEI governments, but for governments worldwide.

Private spending on education includes direct payments to educational institutions that take on several different forms: student tuition or fees; other fees charged for educational services; fees paid for lodging, meals, health services and other welfare services provided to students by and at educational institutions. These non-educational goods and services are commonly referred to as ancillary services as they are purchased at the educational institution but related indirectly to its educational aims.

Few countries collect data on the private contribution towards education in a systematic and cross-nationally comparable manner. Most estimates are derived from the perspective of households and/or educational institutions. For the former, data are collected from household income and expenditure surveys that are conducted regularly in some countries. For the latter, data on private education costs can come from school surveys or other government data collections on tuition and fees and other costs incurred at the school level and the corresponding number of students who attend the school.

Private contribution exceeds 40 per cent of total education spending in Chile, China and Paraguay.

Although the amount of private expenditure on public and private schools for all levels of education appears negligible in India and comparatively moderate in Jordan and Argentina, it accounts for an estimated 40 per cent or more of total educational spending in Chile, China and Paraguay (see Table 13 in Annex A4).

Disaggregating the total amount of private expenditure by level of education reveals that there is some private spending on education in public primary and secondary schools in most countries, largely limited to school supplies, textbooks and related ancillary services. Contributions from private sources

are much more important at the tertiary level where they are estimated to comprise more than half of total spending in a handful of WEI countries. Tuition and fees account for most of the private spending at this level, especially for independent private institutions.

Private spending on educational institutions is more prevalent among private than public schools. Private tertiary institutions meet most of their operating expenses through tuition and other fees. Private primary and secondary schools may also receive direct financial and in-kind support from religious groups, associations and other private entities.

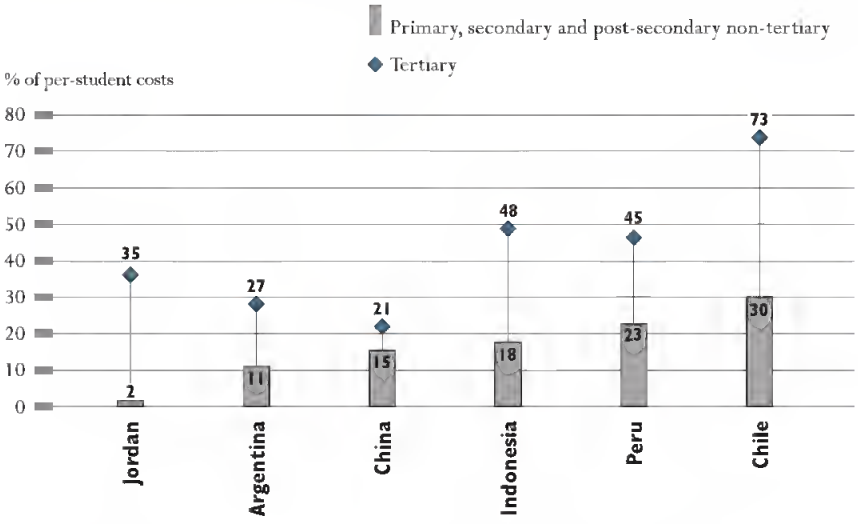
The share of household expenditure on costs per primary and secondary student ranges from 2 per cent in Jordan to 30 per cent in Chile.

Figure 2.16 provides estimates of household expenditure per student for a selected group of countries. It shows, firstly, the enormous range in estimated private costs by level. For primary and secondary levels of education, the share of private expenditure ranges from 2 per cent in Jordan to 30 per cent in Chile. While most expenditure goes towards fees and other costs related to private schools, a certain proportion is spent on public schools. It is important to note that these figures include fees paid for ancillary services and government transfers to households for education. This partly explains the high proportion of private expenditure in the case of Chile.

At the tertiary level, the private share of per-student costs increases markedly, ranging from 21 per cent in China to 73 per cent in Chile.

The proportion of per-student costs that is made up by private contributions at the tertiary level is considerably larger. The share is by far the highest in

Figure 2.16
Proportion of private expenditure[1] of total costs per student by level, 1999



1. Includes fees for ancillary services and government transfers to households.
Note: For country-specific notes, please refer to Table 17 in Annex A4.
Source: OECD/UNESCO WEI.

Chile (73 per cent) followed by Indonesia (48 per cent), then Peru (45 per cent), even though enrolment levels in each country vary considerably. The private share of costs per student rises by education level most dramatically in Jordan where it accounts for 2 per cent at primary level and 35 per cent at tertiary level. While the primary and secondary share is very low compared to other countries, the tertiary share is about average. The smallest difference is found in China where the private proportion increases only slightly at the tertiary level.

Tuition and other fees make up the largest part of private education costs.

By far, the most important component of private education costs is represented by tuition and other fees. Fees are often charged to cover the cost of public examinations. Students also pay miscellaneous fees in order to participate in extra-curricular activities (such as sports or theatre). Students in vocational schools and skill development centres are obliged to pay fees for materials and tools purchased by the institutions for the students.

As noted earlier, the level of household expenditure often depends on the type of school, as public schools require fewer fees than government-dependent or independent private. For example, in Paraguay, students and households play only a very small role in the financing of education in public schools. Parents make voluntary contributions to primary schools to provide additional funds for maintenance and supplies which are not covered by the state budget. In upper secondary education, families pay an annual tuition fee (*matriculas*) and laboratory and related fees. The fees are typically paid directly to the school which uses the funds to purchase goods and services.

In government-dependent private schools in Paraguay, private households pay tuition and fees at all levels since the state does not pay the salaries of all teachers. However, these salary payments cover a substantial portion of schools' costs. In independent private schools, private households pay tuition and fees that must cover the full cost of provision since the state does not subsidize independent private schools.

The situation is similar in Chile where primary and lower secondary education is provided free in public institutions by law. Households may have to pay some amount for educational services in public institutions at upper secondary level and in government-dependent schools at all levels, but the maximum amount is regulated by law.

In a number of WEI countries, parent-teacher associations play an important role in setting fee structures, collecting fees from households and even in spending funds at the primary and secondary school levels.

In Indonesia, for example, such associations not only set public school fees but decide how to spend the funds. Schools may ask for additional payments, such as enrolment fees when students enter an institution for the first time.

Although primary and secondary education is generally free in Malaysia, there are a number of minor fees associated with participation in public schools. For example, parents pay fees to parent-teacher associations. These fees support school activities, primarily extra-curricular activities and sports events. In Jamaica, private households contribute to fundraisers at public primary schools and students pay fees at public secondary schools.

Parent-teacher associations play an important role in channelling private contributions to schools in a number of WEI countries.

An important determinant of overall levels of education expenditure and its distribution by source is related to ancillary services. Ancillary services are defined as services provided by educational institutions that are peripheral to the main objective of learning. The two main components are student welfare services and services for the general public.

Typical ancillary services at primary and secondary schools include meals, transportation, and textbooks. At the tertiary level, housing, dining and health services are often important services provided by education institutions. As Table 2.6 shows, there is considerable variation in what is provided by the state and what is considered the responsibility of students and their families. This can partly explain differences in overall education spending patterns across countries. For example, the low level of education expenditure in Indonesia can be partly attributed to the absence of ancillary services provided by schools. While students and households purchase these services privately, only services provided by the educational institution would fall within the definition of education expenditure used here.

The scope of services provided at educational institutions influences overall levels of education expenditure.

Several countries share similar approaches in targeting the provision of ancillary services. Four of five countries shown in Table 2.6 provide lunch (and/or breakfast) for children from low-income households. In all of the countries, the state provides textbooks for primary and secondary students. The near universal textbook programme in Malaysia began as a programme for the most disadvantaged, now it reaches 4 in 5 students. However, some textbook schemes are still linked to private contributions. In Jamaica, textbook rental charges are included in secondary school fees. In Indonesia (as well as in several other WEI countries), if the number of school textbooks is insufficient, households contribute towards the purchase of additional copies.

At the tertiary level, the playing field changes markedly. The private sector is a much more important player, although the state still enforces rules and regulations governing the system. The most extensive independent private provision is found in the Philippines, Indonesia, China and Brazil (see Figure 2.15). Private universities are usually fully dependent upon student fees and some funding from other private entities. As shown already, the costs of tertiary education, especially in Indonesia, Brazil and China can skyrocket relative to secondary education (see Figure 2.5).

Table 2.6
State provision of ancillary services in selected WEI countries, 2000

	Chile	Jamaica	Indonesia	Malaysia	Paraguay
School meals	State funds meals targeting pupils from low-income households in public and government-dependent private schools (ISCED 0–3).	Some state funds for meals in public schools (ISCED 0–3). School Feeding Program exists although no data are available on intake (ISCED 1).	No state provision. Classes are half day and pupils typically have lunch at home.	State funds meals in public schools. Supplementary food scheme targets primary students (ISCED 1) from low income families. In 1999, 20 per cent of all primary pupils benefited from this programme.	Generally, no state provision. State supports supplementary food scheme in public schools (ISCED 1–2).
Transportation	No state provision. Students get reduced prices, but transport companies do not receive subsidy.	The state provides school buses to take uniformed children to school (ISCED 0–4A).	No state provision. Classes are half-day and pupils typically have lunch at home.	No state provision.	There is a 50 per cent reduction in children's fees for public transport (ISCED 2–3).
Boarding / housing	Some boarding and housing funded by state (ISCED 2–3).	State subsidizes boarding at a few schools (ISCED 2–3) and boarding at the University of the West Indies in Barbados and Trinidad.	No state provision. Classes are half-day.	The state provides boarding schools for students who are from rural areas, low income families or indigenous backgrounds.	State partly funds dormitory construction and maintenance at the National University in Asuncion.
Health services	State provides specific medical programmes at primary and lower secondary level for some institutions.	No state provision.	No state provision.	Ministry of Health provides services to students through School Health Programme (ISCED 1–2).	No state provision.
Guidance / counselling	n/a	State funds guidance counsellors in public schools (ISCED 1–4A).	No state provision.	n/a	State funds guidance counsellors in public schools (ISCED 3).
Textbooks	State funds text books for public and government-dependent schools (ISCED 0–3)	State purchases textbooks and students pay a rental charge that is supported from school fees (ISCED 2–3).	State provides text books to schools, but if supplies are insufficient parents must purchase extra textbooks.	State supports a national textbook loan programme (ISCED 1–3). The programme was originally designed to support children from low income families but by 1999 some 82 per cent of all students qualified.	State provides text books to public schools and funds a small quantity of library books for independent private schools (ISCED 1–2).

Source: OECD / UNESCO WEI Finance Comparability Study

Box 2.6

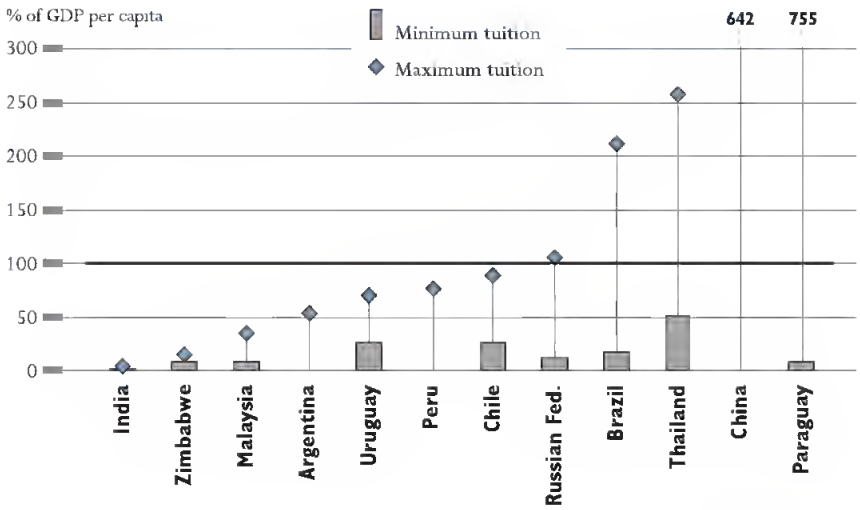
Tuition fees in tertiary education

There exist limited cross-national data on tuition fees for tertiary education. One approach is to report minimum and maximum values of tuition fees in a country and to express them relative to national levels of GDP per capita. However, this approach is limited in that it does not reflect the *actual* distribution of tuition fees actually paid or the average amount paid for tuition. In Figure 2.17, a value of 100 means that the annual tertiary tuition fee is equal to the national GDP per capita and a value of 700 means that the tuition fee is seven times higher than the GDP per capita.

The minimum amount of tuition in several countries, e.g. Argentina, Peru and China, is zero or free of charge. In a majority of countries, the minimum tuition fee falls below 10 per cent of GDP per capita, although it reaches one quarter in Chile and Uruguay and about half of GDP per capita in Thailand. Although tuition levels appear high, the state does more to facilitate participation through support for tertiary students. While there are no data available for Uruguay, both Chile and Thailand, along with Malaysia (where the minimum tuition is considerably lower) spend the highest proportion of public expenditure on grants and loans programmes among all WEI countries.

The reported maximum amount of tuition for a tertiary level programme, although the type of educational programme is not known, costs 34 million *guaranie* in Paraguay and 42,000 *yuan* in China. These two countries have the highest tuition levels relative to GDP per capita with China at 6.4 times higher and Paraguay at 7.6 times higher. In terms of providing support for tertiary students, there are only minor grant programmes and no student loan schemes in either country.

Figure 2.17
Tertiary tuition fees as a percentage of GDP per capita



Sources: Tuition levels from International Association of Universities, 2002; GDP per capita from World Bank, 2002.

Box 2.7

Private flows of expenditure from the perspective of the household

Household surveys offer a valuable perspective on the private flows of education spending. Most WEI governments conduct regular household surveys that collect income and expenditure data from representative samples of their respective populations. As part of the data collection on spending patterns, respondents are often asked to provide information on household expenditure on education. However, such measures are often highly aggregated and lack a consistent definition of what constitutes education expenditure. Moreover, it is difficult to link education expenditure to specific members of the household, i.e. school-age children, particularly those at different levels of education.

Such surveys can provide insights into the relationships among education spending, types of school and income level of the household. A recent study in Peru looked at differences in education expenditure on public and private schools by income quintile (dividing the population into fifths). Levels of spending among the poorest 20 per cent of the population are highest for public schools, likely because lower-income households have a higher proportion of school-age children and are less likely to enrol their children in private institutions. Spending on private schools does increase with household wealth. The richest 20 per cent of the population devotes a considerable proportion (10 per cent) of total household spending to education, most likely at the tertiary level (Saavedra and Suarez, 2001).

The private provision of education in Peru is very similar to the OECD average at lower levels of education, e.g. 12 per cent of primary enrolment, but is much higher at the tertiary level at 38 per cent. Still, the increase in private costs between levels of education in Peru does not appear to rise as steeply as it does in other Latin American countries (see Table 17 in Annex A4).

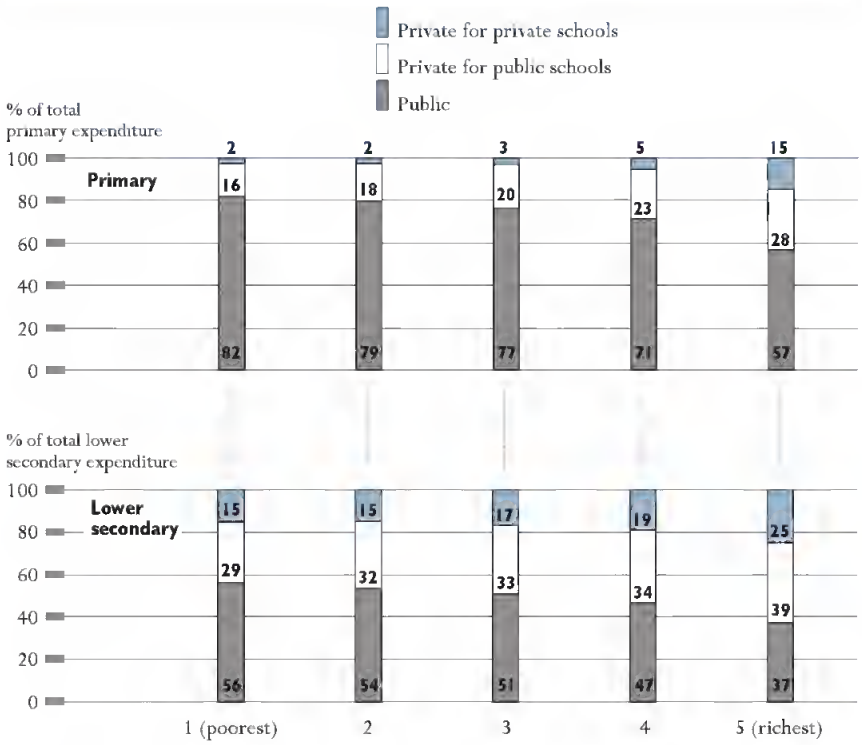
In Indonesia, using the state *SUSENAS* household surveys, a recent World Bank study disaggregated flows of spending by type of expenditure and institutions. As Figure 2.18 shows, poorer households benefit more from public spending on primary schooling, again partly due to the demographic composition of such households. But, even among the poorest households, a significant proportion of household expenditure (16 per cent) goes towards public schools. This share increases as household income increases. Spending on private schools is small and occurs throughout the income distribution, possibly linked to enrolment in religious schools. Those in the highest income quintile are more likely to spend a significant share of household expenditure on private primary schools than others.

At the lower secondary level, there is a much different picture. The public share of expenditure is just over half in the lowest income quintile and drops to 37 per cent in the highest income quintile. Even the poorest households make considerable contributions towards the cost of education. Again, the proportion of private spending on public schools and private schools increases at higher income levels.

What does this imply for Indonesia, a nation that faces some of the most difficult challenges among WEI countries in terms of expanding educational opportunities? It has the lowest level of post-compulsory enrolment and is constrained by the lowest level of total expenditure on education as a share of GDP.

In the economic crises of the late 1990s, the government sought to protect gains in participation at the primary education level – recognition that education at this level is most beneficial for low-income families. However, the challenge in building participation at successive education cycles will be difficult without broader partnerships. This is already partially evident at the lower secondary level, where the mixed profile of schools, both religious and others draw on households from across the income distribution. At the same time these data show that increasing private costs will likely first effect the educational progress of students from low-income families.

Figure 2.18
Household expenditure on education by type, level and household income in Indonesia, 1999



Note: SUSENAS household surveys.
Source: Derived from Lanjouw et al., 2001.

In some countries, such as Indonesia and the Philippines, the state regulates tuition fees of independent private institutions. Nevertheless, the private costs of tertiary education are an important policy concern (see Box 2.6). In addition to tuition and related fees, tertiary level students also pay significant amounts for ancillary services, especially as large proportions of students live in housing maintained and often subsidized by universities.

The costs of tertiary education can skyrocket relative to secondary education, as is the case in Indonesia, Brazil and China.

In some WEI countries, such as Indonesia, tuition fees are set by the state. In other countries, fees are set only for the public sector and are unregulated in the private sector. In Malaysia, private universities account for about 38 per cent of total tertiary enrolment. Private universities are fully financed by student fees and some funding from other private entities. Students also pay a significant amount for ancillary services. The overwhelming majority of students live in housing maintained by universities. Students pay for these and other services that are subsidized by the general university budget.

It can be argued that tuition fees are justifiable for tertiary education but the private costs of tertiary education and the potential exclusion of qualified students is an important policy concern.

The private contribution to education is an important one in WEI countries and one that demands additional research related to household costs and decisions about continuing education. At the tertiary level of education, private contributions (and private providers) are much more prominent than in most OECD countries. Although the expansion of education appears to imply a proportional increase in resources, governments are proving increasingly unable to cope alone with the costs of developing higher education. At the same time, while expansion of higher education should permit more equitable access, what often happens instead is a strengthening of exclusion mechanisms (Skilbeck, 1998). Issues of access should be considered relatively more important in countries with high levels of disparities. As Box 2.7 presents, low-income families cannot afford higher studies for their children because of the rising cost of such studies and the difficulty experienced by states in investing further.

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Chapter 3

COUNTRY PROFILES

About the country profiles

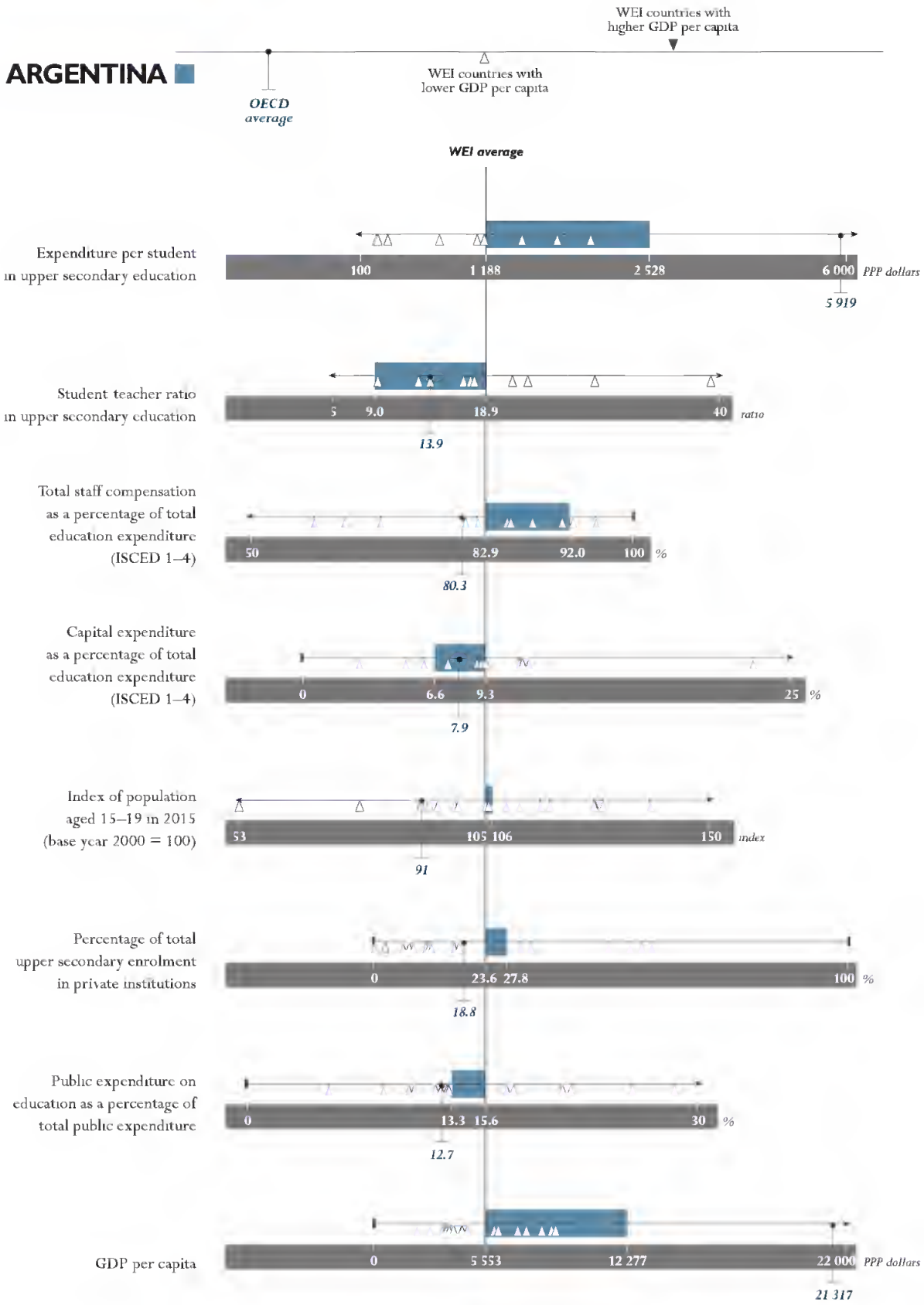
Each profile offers a statistical snapshot of the education system in a WEI country. The chart presents key indicators for the featured country as well as comparable data for other WEI countries and the WEI and OECD averages.

The 2002 indicators focus primarily on upper secondary education and finance (where data are available). The text, prepared with the collaboration of OECD, UNESCO and country representatives, interprets the chart and provides context for the indicators.

Each indicator has four components:

- The vertical axis represents the WEI average.
- The horizontal axis shows:
 - the minimum and maximum value of the indicator
 - the featured country value, and
 - the relative position of other WEI countries, indicated by black and white triangles. Further, the white triangles represent WEI countries with lower GDP than the featured country and the black triangles represent WEI countries with higher GDP.
- The blue bar shows the difference of the featured country value from the WEI average.
- The black dot with vertical descendant marks the OECD country average. (Refer to the legend at top of each figure.)

ARGENTINA


WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in upper secondary education
100
1 188
2 528
6 000
PPP dollars
5 919
Student teacher ratio in upper secondary education
5
9.0
18.9
40
ratio
13.9
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
82.9
92.0
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
6.6
9.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105 106
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
23.6 27.8
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
13.3 15.6
30
%
12.7
GDP per capita
0
5 553
12 277
22 000
PPP dollars
21 317

ARGENTINA

Prepared with the co-operation of the OECD, UNESCO and Ms. Irene Beatriz OIBERMAN.

• Total population	36.6 million
• Percentage of the population aged 15–19	9%
• GDP growth rate	-3.2%
• Total public expenditure as a percentage of GDP	34.1%
• School expectancy for a 5-year-old	16.4 years

Argentina faces both opportunities and serious challenges to expand its education system beyond compulsory levels. With just 9 per cent of its population aged 15–19 in 2000, Argentina stands at the lower end of the range of WEI countries for this school-age population. This population age group will increase by 6 per cent in the next 15 years, compared to an average 5 per cent increase among WEI countries and an average 9 per cent decrease among OECD countries. This moderate increase in demand in Argentina presents the country with an opportunity to mobilize resources to expand enrolment in this age group beyond the current rate of 62.5 per cent.

Argentina has the highest GDP per capita among WEI countries at PPP$12,277 in 1999, placing the country midway between the WEI and OECD averages and even above some OECD countries. However, Argentina is struggling with an economic recession of 3.2 per cent, making it difficult to mobilize financial resources for education in a time of falling tax revenues. Despite these constraints, Argentina spent 13.3 per cent of its total public expenditure in 1999 on education, a level comparable to OECD countries and not far off the WEI average of 15.6 per cent.

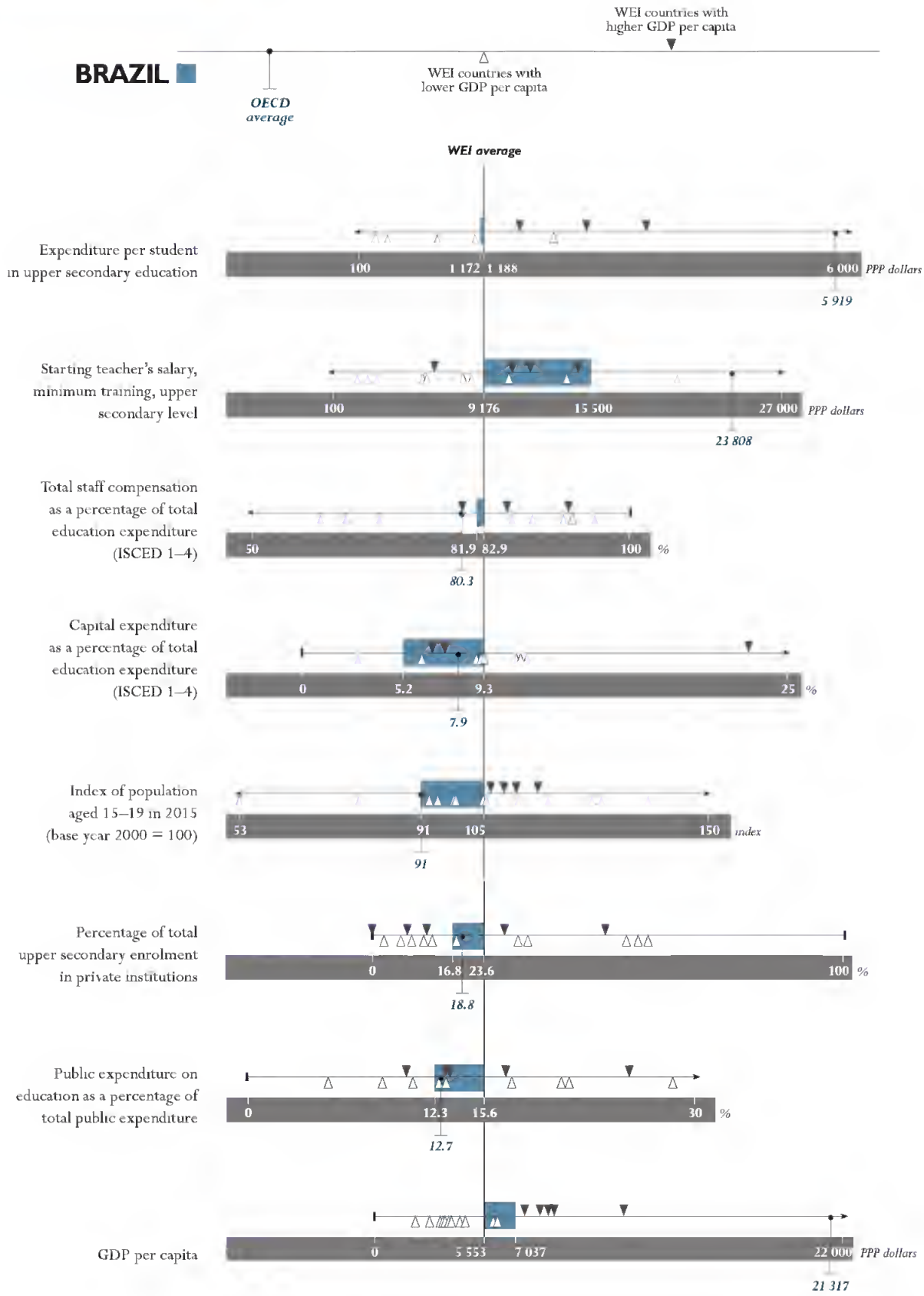
At the upper secondary level of education, the favourable demographic context and high level of economic development translate into relatively high expenditure per student. With PPP$2,528 spent annually per upper secondary student, Argentina ranks first among WEI countries and spends more than twice the WEI average of PPP$1,188.

This high expenditure per student is no doubt related to the fact that Argentina employs more than twice as many teachers per student as the WEI average. It has a ratio of 9.0 students per teacher at the upper secondary level, the lowest of all WEI countries, well below the OECD average, and second only to Portugal when compared to OECD countries. At 92 per cent, Argentina ranks third among WEI countries for the share of current education expenditure it spends on staff in primary and secondary schools and is far above the OECD and WEI averages of 80.3 per cent and 82.9 per cent respectively. Another noteworthy pattern is that Argentina is a relatively low spender on capital, although this pattern may reflect high levels of participation and reasonably stable demand projected for the 2000–2015 period.

Private upper secondary education is slightly above the WEI average with 27.8 per cent of students in Argentina attending private institutions, nine percentage points higher than the OECD average.

In terms of education finance, private sources account for only 11.4 per cent of expenditure on primary and secondary institutions. Given the deteriorating economic situation and low level of subsidies to the private sector relative to expenditure per student, one challenge for Argentina's education system in the short term may be to address equity issues arising from the affordability of education for low-income households.

For data tables see Annex A4.


BRAZIL
OECD average
WEI countries with lower GDP per capita
WEI countries with higher GDP per capita
WEI average
Expenditure per student in upper secondary education
100
1 172
1 188
6 000
PPP dollars
5 919
Starting teacher's salary, minimum training, upper secondary level
100
9 176
15 500
27 000
PPP dollars
23 808
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
81.9
82.9
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
5.2
9.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
91
105
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
16.8
23.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
12.3
15.6
30
%
12.7
GDP per capita
0
5 553
7 037
22 000
PPP dollars
21 317

BRAZIL

Prepared with the co-operation of the OECD, UNESCO, Mr. João Batista GOMES NETO and Mr. Ivan CASTRO DE ALMEIDA.

• Total population	163.3 million
• Percentage of the population aged 15–19	11%
• GDP growth rate	0.8%
• School expectancy for a 5-year-old	15.7 years

In 2000, 11 per cent of Brazil's population was aged 15–19. Unlike most WEI countries, the size of the age group is expected to decline over the next 15 years by 9 per cent, a decrease comparable to most OECD countries. The current enrolment rate of 78 per cent among 15–19 year-olds places Brazil just above the OECD average and far above the WEI average of 54.7 per cent. The strong level of enrolment combined with the future fall in demand provides Brazil with an opportunity to focus its resources at the upper secondary level of schooling on the quality of education.

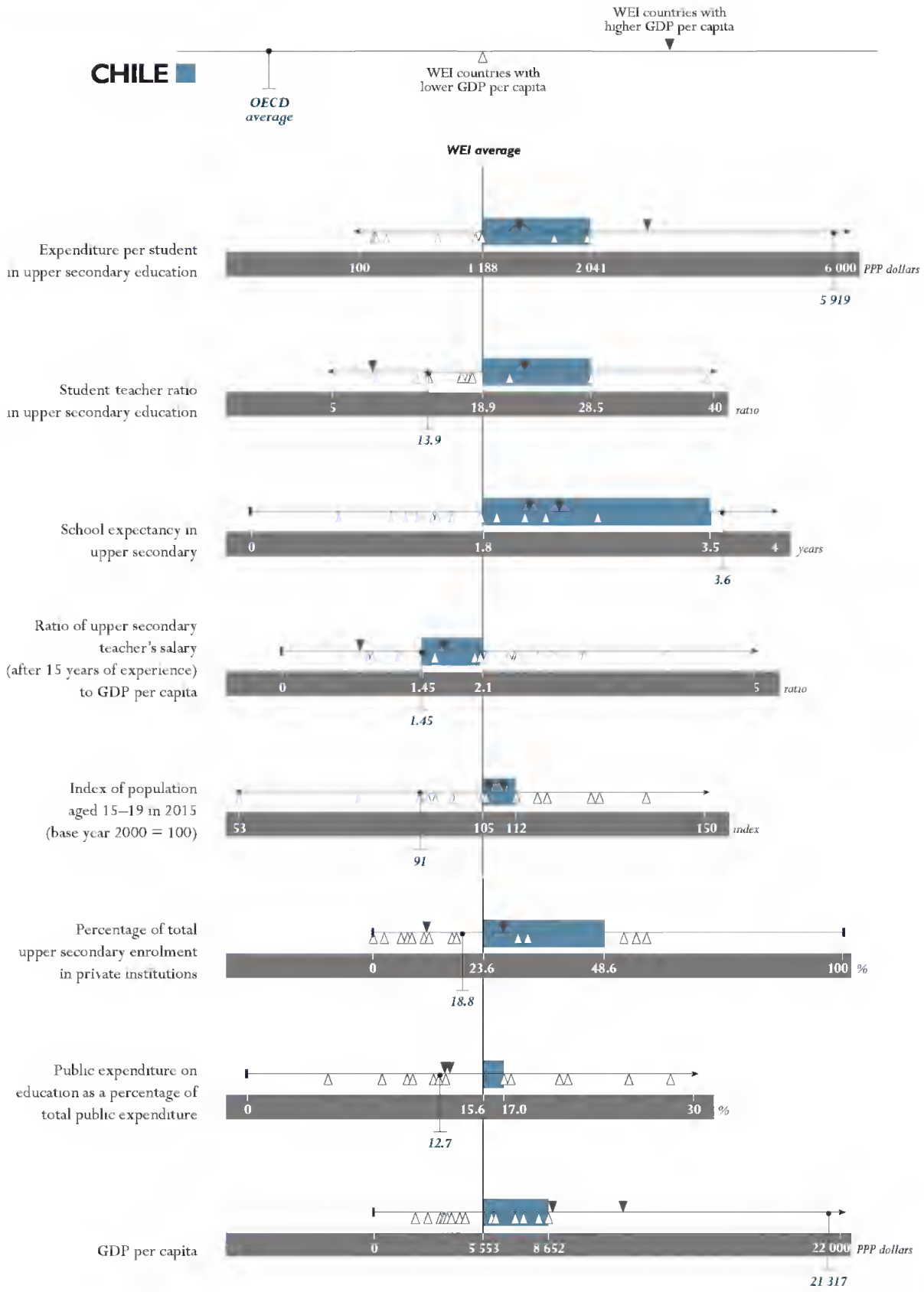
In economic terms, Brazil has a GDP per capita of PPP$7,037, which places it above the WEI average but at only one third of the OECD average. Facing low GDP growth rates, e.g. 0.8 per cent in 1999, less than half the WEI average, Brazil is in difficult circumstances for mobilizing resources for education. Nevertheless, 12.3 per cent of total public expenditure is dedicated to education, comparable to the OECD average and slightly lower than the WEI average.

Having successfully focused its educational efforts at the primary level, Brazil now faces the challenge of improving conditions for students at the upper secondary level. Although Brazil ranks fifth among WEI countries in expenditure per upper secondary student with PPP$1,172 annually, it is close to the WEI average and more than five times less than the OECD average.

Though Brazil has the second lowest level of capital expenditure, it devotes 81.9 per cent of current education expenditure to staff compensation in primary and secondary schools, a proportion that places it between the OECD and WEI averages. Relatively high starting salaries of PPP$15,500, almost twice the WEI average, are offset by a relatively low ratio of salary after 15 years of experience to starting salary at 1.04, compared to the WEI average ratio of 1.48. However, after 15 years of experience, the average salary of an upper secondary education teacher is 2.35 times the GDP per capita, close to the WEI average but well above the OECD average of 1.45.

Brazilian education policy is focusing strongly on improving the conditions of secondary education. Perhaps the biggest challenge that Brazil faces in the years to come is to find strategies that ensure these efforts have a direct impact on student learning.

For data tables see Annex A4.


CHILE
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in upper secondary education
100
1 188
2 041
6 000
PPP dollars
5 919
Student teacher ratio in upper secondary education
5
18.9
28.5
40
ratio
13.9
School expectancy in upper secondary
0
1.8
3.5
4
years
3.6
Ratio of upper secondary teacher's salary (after 15 years of experience) to GDP per capita
0
1.45
2.1
5
ratio
1.45
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
112
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
23.6
48.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
15.6
17.0
30
%
12.7
GDP per capita
0
5 553
8 652
22 000
PPP dollars
21 317

CHILE

Prepared with the co-operation of the OECD, UNESCO, Ms. Paula DARVILLE and Ms.Vivian HEYL.

• Total population	15.0 million
• Percentage of the population aged 15–19	8%
• GDP growth rate	-1.1%
• Total public expenditure as a percentage of GDP	24.5%
• School expectancy for a 5-year-old	14.5 years

Chile's education system operates under relatively favourable demographic and economic conditions in comparison with most other WEI countries. Demographic conditions in Chile are more favourable with 43 per cent of the population in the age groups for primary to tertiary education, significantly below the WEI average. Furthermore, demographic changes are underway. The population aged 5–14 is expected to decrease by 3 per cent over the next 15 years, but the populations aged 15–19 and 20–29 will still increase by 12 per cent and 18 per cent respectively. Chile has the highest school expectancy of WEI countries at the upper secondary level with 3.5 years, it thus faces the challenge of maintaining, if not improving, its participation levels in upper secondary and tertiary education despite growing demographic pressure at these levels.

In terms of GDP per capita, Chile ranks third among WEI countries, behind Argentina and very close to Uruguay. At PPP$8,652 in 1999, it stands 56 per cent above the WEI average. This positive outlook is constrained, however, by a 1.1 per cent decrease in GDP in 1999, although Chile is withstanding regional economic difficulties.

The favourable balance of financial resources and demographic conditions in Chile translates into above-average access to and participation in education. A 5-year-old can expect 14.5 years of schooling, 1.5 years more than the WEI average. It should be noted, however, that other WEI countries achieve comparable or even higher overall school expectancy with lower resources per capita.

Participation in primary school and lower secondary education is almost universal, while 2 out of 3 young persons aged 15–19 are also enrolled in school – the third-highest rate in WEI countries – and that does not take into account those in this age group participating in tertiary education.

This above-average participation in education carries a cost: Chile is the third-highest-spending WEI country on education for all levels. Chile spends 7.2 per cent of its GDP on education, well above the WEI average of 5.5 per cent; however, as part of that, the private sector contribution amounts to 3.1 per cent of GDP. In fact, *public* spending on education relative to GDP is actually below the WEI average. Private spending largely benefits the small proportion of students enrolled in independent private institutions. Chile spends 17 per cent of total public expenditure on education, greater than the WEI average. This reflects Chile's smaller public sector which has a total expenditure of 24.5 per cent of GDP.

Almost half of upper secondary students are enrolled in private schools, the fourth-highest proportion among WEI countries and more than twice the WEI average. However, students enrolled in financially independent private schools account for only 16.1 per cent of the total; thus public spending actually supports 84 per cent of students. Expenditure per upper secondary student is PPP$2,041, placing Chile second highest among WEI countries despite a high ratio of 28.5 students per teacher and relatively modest teachers' salaries. Mid-career salaries in upper secondary public schools are only slightly above the WEI average in PPP terms, but lower as a ratio of GDP per capita at 1.45 times GDP per capita.

For data tables see Annex A4.


CHINA
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in upper secondary education
100
1 188
1 768
6 000
PPP dollars
5 919
Student teacher ratio in upper secondary education
5
13.8
18.9
40
ratio
13.9
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
64.3
82.9
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
8.8
9.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
95
105
150
index
91
Enrolment in general programmes as a percentage of total enrolment in upper secondary education
20
47.0
74.7
100
%
48.3
Public expenditure on education as a percentage of total public expenditure
0
13.0
15.6
30
%
12.7
GDP per capita
0
3 617
5 553
22 000
PPP dollars
21 317

CHINA

Prepared with the co-operation of the OECD, UNESCO, Ms. Zhi Hua LIN and Mr. Hong-Wei MENG.

• Total population	1,259.1 million
• Percentage of the population aged 15–19	7%
• GDP growth rate	7.1%
• Total public expenditure as a percentage of GDP	16.1%
• School expectancy for a 5-year-old	10.3 years

With only 7 per cent of its total population in the group aged 15–19, China has the lowest share among WEI countries. Moreover, this population group is expected to decline by 5 per cent over the period 2000–2015. In terms of participation, China has the second-lowest gross entry rate to upper secondary education at 42 per cent, well below the WEI average of 64 per cent. As in most WEI countries, compulsory education ends at age 14, which corresponds to the typical age of completion of lower secondary school in China. The average years of schooling among the population aged 15–64 is 5.96 years, third-lowest among WEI countries which average 7.63 years.

China is experiencing the most rapid GDP growth of all WEI countries. If this increases demand for qualified workers, China's education system is in a good position to meet the need since 53 per cent of upper secondary students are enrolled in vocational programmes, more than twice the WEI average. Although China spends a relatively small share of its GDP on educational institutions at 3.7 per cent, it appears to have enough financial and human resources to respond to the demand for upper secondary education thanks to a favourable demographic context and economic situation.

At the upper secondary level, the expenditure per student is third-highest among WEI countries at PPP$1,768 annually, well above the WEI average of PPP$1,188. Meanwhile, the ratio of 13.8 students per teacher is well below the WEI average of 18.9 and almost identical to the OECD average.

China's capital expenditure as a percentage of total educational expenditure at 8.8 per cent is similar to most WEI countries which average 9.3 per cent. However, the proportion of current educational expenditure allocated to staff compensation in primary to post-secondary institutions is the lowest at 64.3 per cent among WEI countries which average 82.9 per cent. It should be noted that Chinese authorities also provide teachers with social supports such as housing that may not be recorded as teachers' compensation. This may explain why China has the second-lowest ratio at 0.88 when an upper secondary teacher's salary, after 15 years of experience, is related to GDP per capita. The WEI average for this ratio is substantially higher at 2.10.

Public expenditure on education as a percentage of total public expenditure at 13 per cent is not far off the WEI average of 15.6 per cent. However, private sources, which include subsidies attributable to payments to educational institutions received from public sources, contribute 44.2 per cent of the expenditure on primary and secondary institutions, the highest such proportion among WEI countries and more than twice the WEI average of 21.7 per cent.

For data tables see Annex A4.


EGYPT
OECD average
WEI countries with lower GDP per capita
WEI countries with higher GDP per capita
WEI average
School expectancy in upper secondary education
0
1.8
1.9
4
years
3.6
Enrolment rate of the population aged 5-14
10
83.5
88.9
105
%
97.9
Student teacher ratio in upper secondary education
5
12.8
18.9
40
ratio
13.9
Enrolment in general programmes as a percentage of total enrolment in upper secondary education
20
35.2
74.7
100
%
48.3
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
105
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
6.2
23.6
100
%
18.8
GDP growth rate
-4
2.2
6
8
%
3.2
GDP per capita
0
3 420
5 553
22 000
PPP dollars
21 317

EGYPT

Prepared with the co-operation of the OECD, UNESCO and Mr. Mohamed Abdul Salam RAGHEB.

• Total population	62.9 million
• Percentage of the population aged 15–19	12%
• GDP growth rate	6.0%
• School expectancy for a 5-year-old	10.0 years

Egypt's education system operates under heavy demographic pressure. More than half the population is aged 5–29, one of the highest proportions among WEI and OECD countries. Furthermore, even though the population aged 5-14 is expected to stabilize and then decrease by 4 per cent by 2015, the 15–19 and 20–29 age groups will increase by 5 per cent and 38 per cent respectively. The latter figure represents the third-highest growth rate in the 20–29 age group among WEI countries.

At the same time, national resources to meet demand for education are currently limited. At PPP$3,420, GDP per capita falls at the lower end of the range among WEI countries. Egypt, however, experienced solid economic growth in 1999 with a 6 per cent increase in GDP, greater than the population growth rate and the fourth-best performance among WEI countries. If these economic trends are sustained over the next decade, Egypt should move towards the WEI average in terms of financial resources, providing scope for improvements in education.

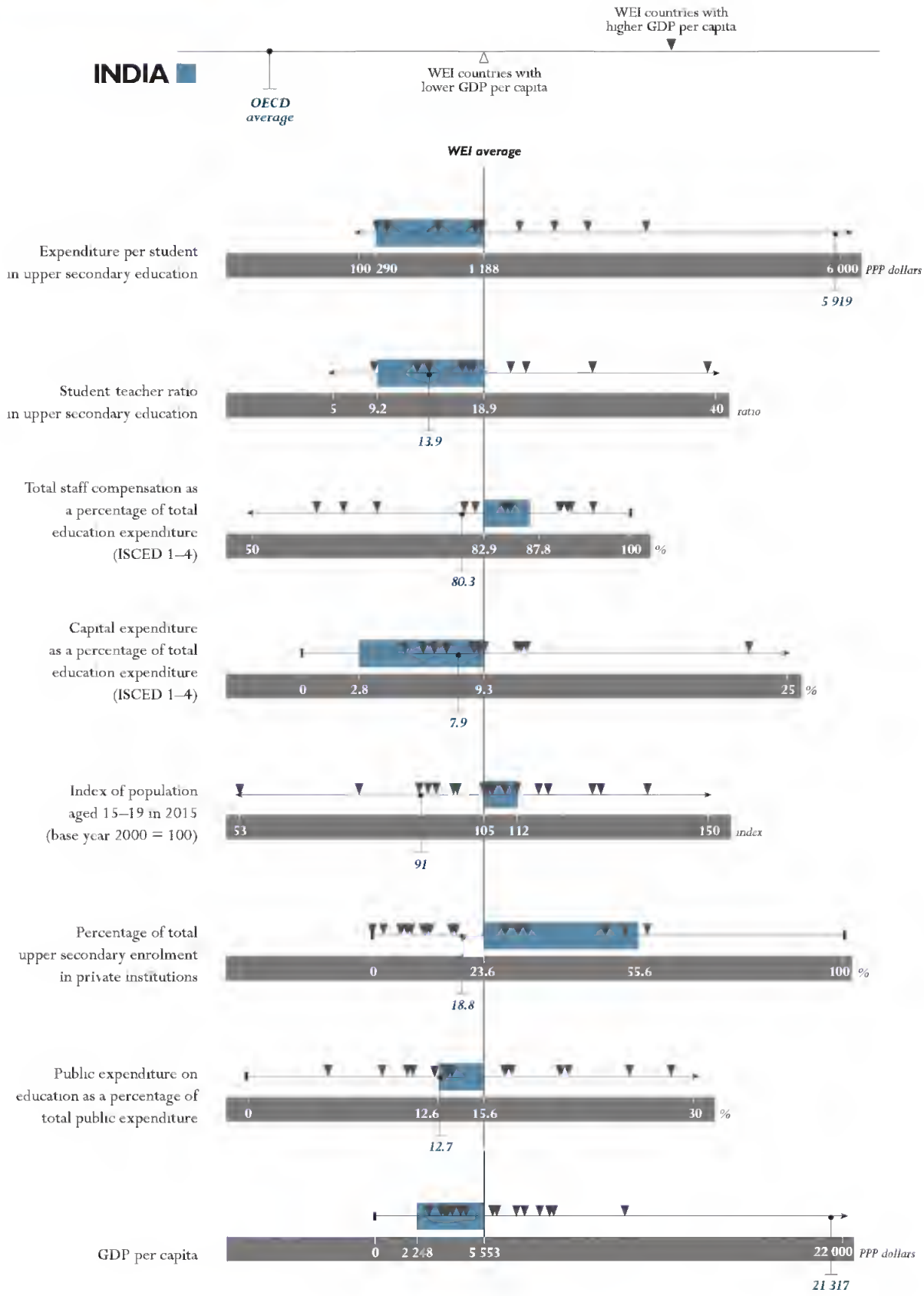
Currently, a 5-year-old in Egypt can expect to get 10 years of schooling, three years less than the WEI average. However, 1.9 years of it is spent at the upper secondary level, an above-average achievement by WEI standards. It should be noted that the participation of 15–19 year-olds in tertiary education is underestimated due to current methodology. Egypt is approaching universal enrolment rates for the 5–14 year-old population. The main challenge ahead is to reach universal enrolment for this age group and to further expand access to and participation in education despite the demographic pressure that will arise at the tertiary level.

The public provision of education dominates schooling in Egypt from primary to upper secondary levels. Only 6.2 per cent of students at these levels attend private schools, among the lowest proportions in WEI countries. Egypt also stands out among WEI countries for its concentration on vocational or pre-vocational education which accounts for nearly two thirds of upper secondary enrolment, compared with a WEI average of 25.0 per cent. However, a secondary-education enhancement program has been implemented recently. It aims to gain more balance between general and vocational modes of education and to provide more flexibility in moving from one to the other.

The cost of education in Egypt is influenced by several factors. Teachers' salaries, traditionally the main component of education expenditure, are moderate by WEI standards at 1.58 times the GDP per capita for upper secondary teachers – below the WEI average but slightly above the OECD average. The moderate level of teacher compensation is, however, counterbalanced by a below-average teaching load of 748 hours per year and above-average instruction time for students. Egypt also has the third-lowest student-teacher ratio of the WEI countries at 12.8 at the upper secondary level – below the OECD and WEI averages of 13.9 and 18.9 respectively. Together these factors increase the cost of education in Egypt.

It should be noted that the low aggregate student-teacher ratio hides severe teacher shortages in some subject areas and geographic regions. This suggests that retraining and in-service training of current teachers will be needed in order to fill such shortages at limited cost.

For data tables see Annex A4.


INDIA
OECD average
WEI countries with lower GDP per capita
WEI countries with higher GDP per capita
WEI average
Expenditure per student in upper secondary education
100 290
1 188
6 000
PPP dollars
5 919
Student teacher ratio in upper secondary education
5
9.2
18.9
40
ratio
13.9
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
82.9
87.8
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
2.8
9.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
112
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
23.6
55.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
12.6
15.6
30
%
12.7
GDP per capita
0
2 248
5 553
22 000
PPP dollars
21 317

INDIA

Prepared with the co-operation of the OECD, UNESCO and Mr. Yash Pal AGGARWAL.

• Total population (1999)	997.5 million
• Percentage of the population aged 15–19 (1999)	9%
• GDP growth rate (1999)	6.5%

The population aged 5–19 represents 34 per cent of India's population, however the country's demographic profile is changing. The compulsory-education age group (ages 5–14) is expected to remain stable until 2015 while the population aged 15–19 will still increase by 12 per cent. A lessening of demographic pressure could allow India to achieve one of its priorities – providing eight years of quality education to all children in the 6-14 age group by 2010. The next challenge will be to meet growing demand for upper secondary education.

Gender equity is also an issue. The entry rate of females to upper secondary education is only 79 per cent that of males, meaning there are about 8 females for every 10 males entering that level. India thus records the lowest gender parity index among WEI countries, since girls typically have the enrolment advantage at this level in WEI countries.

India has the lowest GDP per capita among WEI countries at PPP$2,248 in 1999, despite a growing economy. India posted the second-highest GDP growth rate of all WEI countries after China and fifth-highest among both WEI and OECD countries. With a demanding demographic context but improving economic situation, it remains to be seen whether India will be able to mobilize resources for upper secondary education. It has the lowest expenditure per student at this level with PPP$290 per student, far below the WEI average of PPP$1,188. India and the Philippines are the only WEI countries where expenditure for students in upper secondary education is less than for those in primary which is PPP$303 in India.

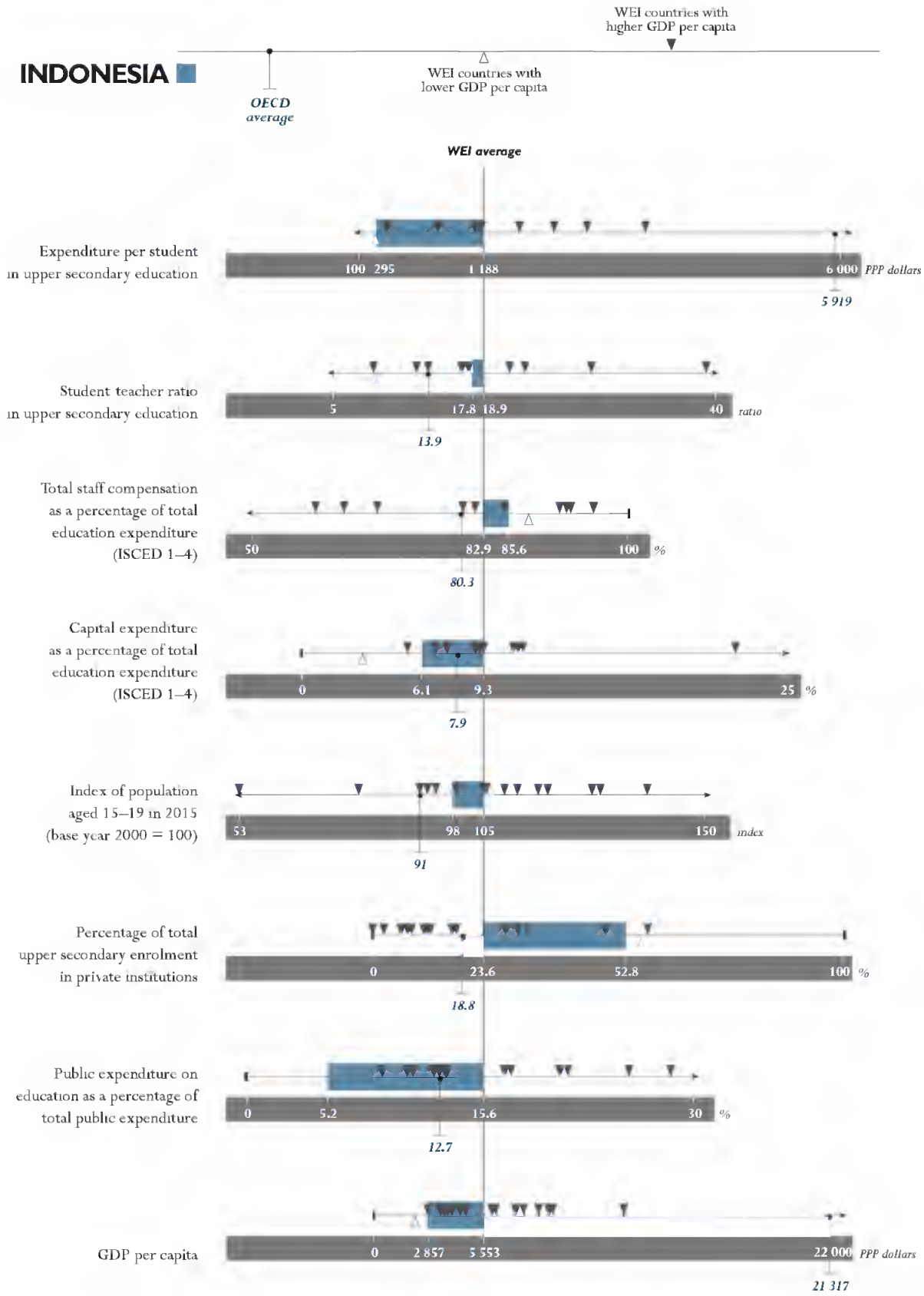
India's education financing appears to be focused on maintaining resources for hiring teachers. It has, by far, the lowest capital expenditure as a proportion of total education expenditure for primary to post-secondary non-tertiary education at 2.8 per cent. However, it has the fifth-highest proportion of current education expenditure devoted to staff compensation at these levels at 87.8 per cent. This translates into the second-lowest student-teacher ratio in upper secondary among WEI countries – 9.2, less than half the WEI average and just behind Argentina which has the highest expenditure per student among WEI countries. At this level, women are only 32.9 per cent of the teaching force, the lowest rate among WEI countries.

Low expenditure per student and past demographic pressures have contributed to a high level of enrolment – far greater than the WEI and OECD averages – in private institutions at the upper secondary level, although most of the schools depend on government funding.

To ensure access to upper secondary education, India needs to increase the proportion of public expenditure devoted to education from the current 12.6 per cent.

For data tables see Annex A4.

INDONESIA


WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in upper secondary education
100 295 1 188 6 000 PPP dollars
5 919
Student teacher ratio in upper secondary education
5 17.8 18.9 40 ratio
13.9
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50 82.9 85.6 100 %
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0 6.1 9.3 25 %
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53 98 105 150 index
91
Percentage of total upper secondary enrolment in private institutions
0 23.6 52.8 100 %
18.8
Public expenditure on education as a percentage of total public expenditure
0 5.2 15.6 30 %
12.7
GDP per capita
0 2 857 5 553 22 000 PPP dollars
21 317

INDONESIA

Prepared with the co-operation of the OECD, UNESCO and Mr. Ade CAHYANA.

• Total population	210.4 million
• Percentage of the population aged 15–19	11%
• GDP growth rate	0.3%
• Total public expenditure as a percentage of GDP	17.8%
• School expectancy for a 5-year-old	9.9 years

The population aged 15–19 in Indonesia will remain relatively stable in the future with a small decrease of 2 per cent expected between 2000 and 2015. The expected years of schooling for a 5-year-old at 9.9 years is still the lowest among WEI countries which average 13 years. However, at 7.25 years, the average years of schooling in the population aged 15–64 has steadily increased since 1960 and almost reached the WEI average. At present, the ratio of enrolled students to the labour force aged 25–64 at 56 per cent is far below the WEI average of 91 per cent.

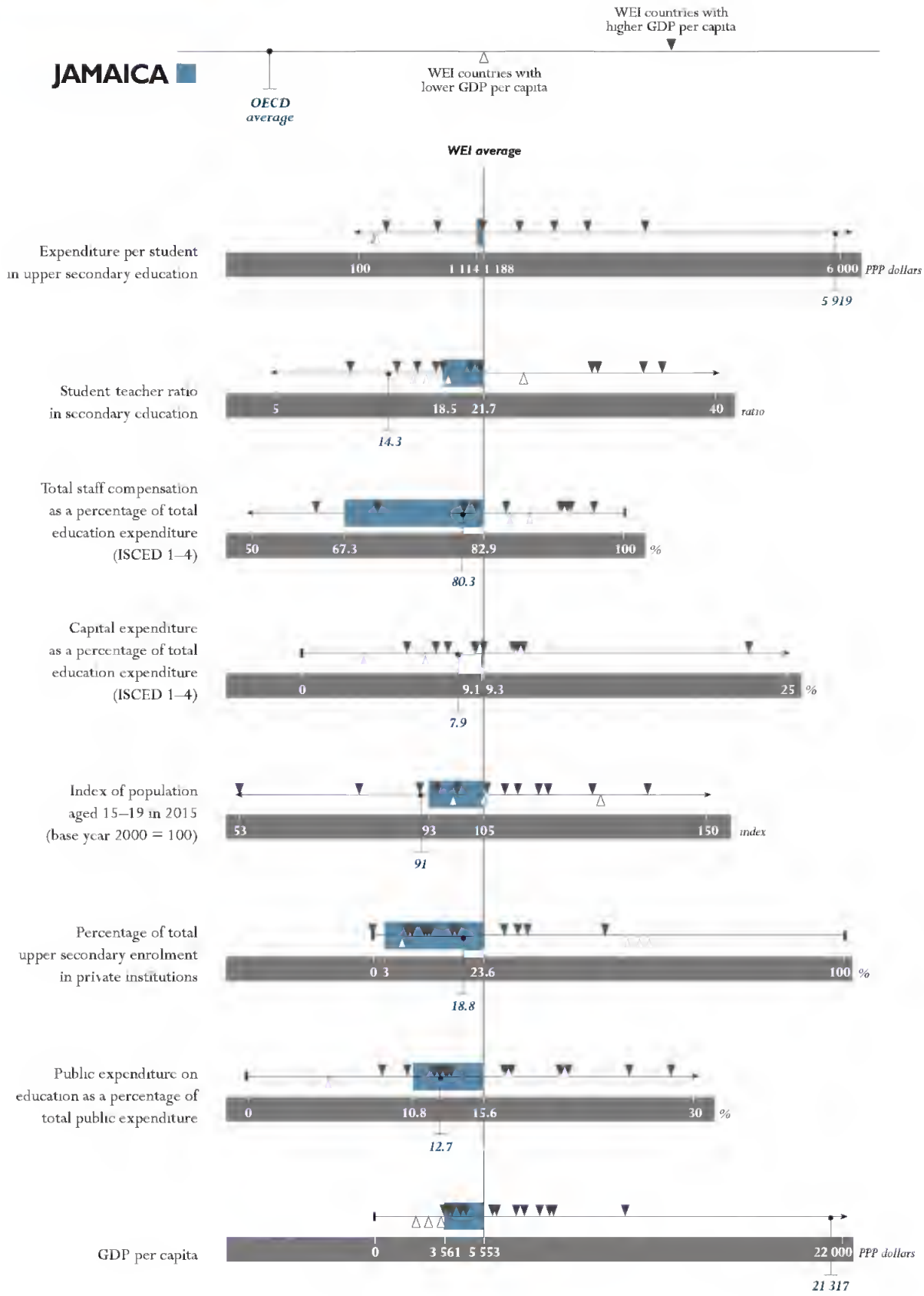
Indonesia's GDP per capita is about half the WEI average but, for the first time since the Asian economic crisis, the country has resumed a positive GDP growth rate of 0.3 per cent. However, financial resources available remain limited and, consequently, only 5.2 per cent of total public expenditure goes to education, just one third of the WEI average. Since 1970, the share of central government debt as a percentage of GDP has increased from about 25 per cent in the 1970s to more than 40 per cent in the 1990s and led to a decrease of the decennial average share of central government expenditure devoted to education from 6.2 per cent to 4.9 per cent.

Even allowing for an underestimation of 15 per cent due to reporting problems in some districts, the annual expenditure per student at the upper secondary level at PPP$295 is well below the WEI average. Still, it is almost four times greater than the amount allocated to an Indonesian pupil in primary education, at PPP$81 the lowest funding level of all WEI countries. Capital expenditure is relatively low at 6.1 per cent compared to a WEI average of 9.3 per cent for primary to post-secondary non-tertiary levels combined. The proportion of current education expenditure allocated to staff compensation at these levels is above the WEI average while the student-teacher ratio in upper secondary is close to the WEI average of 17.8.

As in the Philippines and India, the share of students attending private schools increases dramatically by level of education – 7.3 per cent in primary education, 27.9 per cent in lower secondary and 52.8 per cent in upper secondary education. Access to private education may be hindered by relatively low household expenditure on educational institutions in Indonesia – PPP$29 per student in primary, secondary and non-tertiary post-secondary education combined compared to an average of PPP$192 for WEI countries.

The system of administration and financing of education in Indonesia is in transition from a centralized system to a decentralized one with fully autonomous districts. With the full implementation of Law 22 (1999) and Regulation 25 (2000), districts will have complete autonomy in pre-primary, primary and secondary education.

For data tables see Annex A4.


JAMAICA
OECD average
WEI countries with lower GDP per capita
WEI countries with higher GDP per capita
WEI average
Expenditure per student in upper secondary education
100
1 114
1 188
6 000
PPP dollars
5 919
Student teacher ratio in secondary education
5
18.5
21.7
40
ratio
14.3
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
67.3
82.9
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
9.1
9.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
93
105
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
3
23.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
10.8
15.6
30
%
12.7
GDP per capita
0
3 561
5 553
22 000
PPP dollars
21 317

JAMAICA

Prepared with the co-operation of the OECD, UNESCO, Ms. Valerie BEEN, Mr. Dwight HAMILTON and Ms. Janet McFARLANE-EDWARDS.

• Total population	2.6 million
• Percentage of the population aged 15–19	10%
• GDP growth rate	-0.4%
• Total public expenditure as a percentage of GDP	57.9%
• School expectancy for a 5-year-old	14.4 years

Demographic conditions in Jamaica appear relatively positive. With 20 per cent of its population aged 5–14, 10 per cent aged 15–19 and 18 per cent aged 20–29, Jamaica is close to WEI averages. Most importantly, the next 15 years will see the populations aged 5–14 and 15–19 shrink by 8 per cent and 7 per cent respectively – decreases similar in size to those in OECD countries. Lessening demographic pressure opens up opportunities to improve the education system, but financial resources in Jamaica are limited. A GDP per capita of PPP$ 3,561 puts the country at the lower end of the WEI range and 36 per cent below the WEI average. Economic conditions worsened in 1999 with a 0.4 per cent decrease in GDP.

Given this context, Jamaica turns in a comparatively good performance as far as participation in education is concerned. A 5-year-old child can expect 14.4 years of schooling, almost one and a half years beyond the WEI average and the sixth-highest performance among WEI countries. School expectancy at the upper secondary level is, however, below average. Extending participation in upper secondary and tertiary education will probably be the main challenge for Jamaica in coming years and the declining demographic trends expected in these age groups will constitute a definite advantage.

Overall, Jamaica spends 9.9 per cent of its GDP on education, the highest proportion in any WEI or OECD country. The private sector is also heavily involved in education finance contributing 37.6 per cent of total expenditure on education, a high proportion by WEI standards. Public education expenditure represents only 10.8 per cent of total public expenditure, but this occurs in the context of strong state involvement in the economy with total public expenditure amounting to as high as 57.9 per cent of GDP.

Almost all upper secondary education takes place in public institutions with only 3 per cent of upper secondary students attending private institutions. Learning conditions at the secondary level of education appear relatively good in Jamaica, with 18.5 students per teacher, a ratio midway between the OECD and WEI averages of 14.3 and 21.7 respectively. This factor may help to explain why expenditure per upper secondary student at PPP$ 1,114 almost reaches the WEI average despite a relatively low GDP per capita.

Another factor may be the relatively high share of expenditure on capital at the primary to post-secondary levels of education given the demographic trends expected for the 5–14 and 15–19 age groups and suggesting current investments in school developments and building projects.

Another striking feature of the Jamaican education system is the comparatively low proportion of current expenditure devoted to staff compensation – 67.3 per cent of current expenditure on primary to post-secondary educational institutions. Jamaica is the second-lowest-spending WEI country in this regard, significantly below the average of 82.9 per cent. This does not necessarily mean that teachers' salaries are low. At 2.82 times GDP per capita, upper secondary teachers' salaries stand fourth among WEI countries.

For data tables see Annex A4.


JORDAN
OECD average
WEI countries with lower GDP per capita
WEI countries with higher GDP per capita
WEI average
Expenditure per student in upper secondary education
100
806
1 188
6 000
PPP dollars
5 919
Student teacher ratio in upper secondary education
5
16.9
18.9
40
ratio
13.9
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
82.9
92.5
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
9.3
11
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
139
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
8.7
23.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
15.6
20.6
30
%
12.7
GDP per capita
0
3 955
5 553
22 000
PPP dollars
21 317

JORDAN

Prepared with the co-operation of the OECD, UNESCO and Ms. Jehad Jamil ABU EL-SHAAR.

• Total population	4.9 million
• Percentage of the population aged 15–19	12%
• GDP growth rate	3.1%
• Total public expenditure as a percentage of GDP	24.2%
• School expectancy for a 5-year-old	11.9 years

Demographic and economic conditions in Jordan make the broadening and improvement of education more challenging than in many other WEI countries.

Jordan has the fastest-growing and proportionately largest school-age population among WEI countries. The population aged 5–29 makes up almost 60 per cent of the entire population with 27 per cent of the population aged 5–14, 12 per cent aged 15–19 and 20 per cent aged 20–29. Over the next 15 years, Jordan also faces the highest demographic growth rates of any WEI country for its populations aged 5–14 and 15–19, and the seventh-highest growth rate for its population aged 20–29, with expected increases ranging between 24 per cent and 43 per cent.

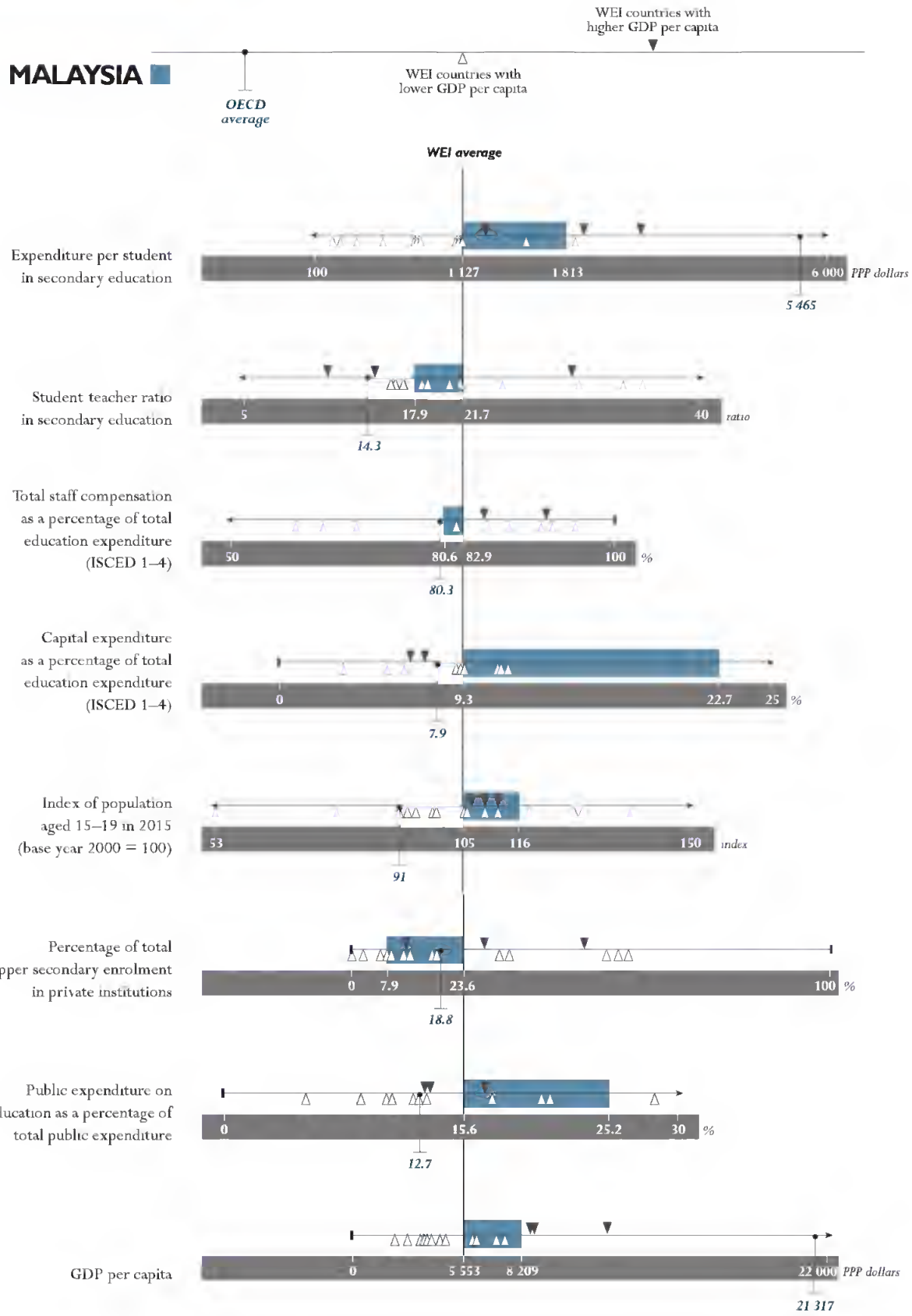
Economic conditions in Jordan leave little room for substantial resource mobilization for education in the near future. Despite a GDP growth rate of 3.1 per cent in 1999, Jordan's GDP per capita at PPP$3,955 stands in the lower range of WEI countries and is 29 per cent below the WEI average. Given these constraints, Jordan's school expectancy is only 11.9 years.

High demand and limited financial resources mean Jordan's spending on education takes up a relatively high proportion of its GDP and total public expenditure. Public expenditure for all levels of education represents 5 per cent of GDP and 20.6 per cent of total public expenditure, above the WEI averages of 4.3 per cent and 15.6 per cent respectively. In terms of expenditure per student, the high number of beneficiaries translates into a relatively low figure – PPP$806 compared to the WEI average of PPP$1,188. Nevertheless, current policy efforts aim to direct public spending towards basic and secondary education.

Upper secondary education is provided mainly by public schools with only 8.7 per cent of students enrolled in private schools. Demographic constraints translate into Jordan spending the third-highest proportion of education expenditure on capital – 11 per cent of the total for primary and secondary education. This high level of investment is designed to respond to the current and future demand for education.

Similarly, staff compensation accounts for 92.5 per cent of current expenditure, the second-highest proportion among WEI countries. Non-demographic factors also give rise to this result, including below-average student-teacher ratios of 21.2 at primary and lower secondary levels and 16.9 at upper secondary level, below-average teachers' working time and relatively generous teachers' salaries relative to GDP per capita.

For data tables see Annex A4.


MALAYSIA
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in secondary education
100
1 127
1 813
6 000
PPP dollars
5 465
Student teacher ratio in secondary education
5
17.9
21.7
40
ratio
14.3
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
80.6
82.9
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
9.3
22.7
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
116
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
7.9
23.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
15.6
25.2
30
%
12.7
GDP per capita
0
5 553
8 209
22 000
PPP dollars
21 317

MALAYSIA

Prepared with the co-operation of the OECD, UNESCO and Ms. Khalijah MOHAMMAD and Dato' Dr. Azmi ZAKARIA.

• Total population	22.7 million
• Percentage of the population aged 15–19	10%
• GDP growth rate	5.8%
• Total public expenditure as a percentage of GDP	22.6%
• School expectancy for a 5-year-old	12.8 years

Demographic conditions in Malaysia are challenging. The population aged 5–29 makes up half the total population, slightly above the WEI average. Despite a stabilization of its population aged 5–14 over the next 15 years, Malaysia will face significant increases of 16 per cent in its 15–19 year-olds and 32 per cent in its 20–29 year-olds – above the corresponding WEI averages. Malaysia probably has among the most favourable economic conditions of all WEI countries. At PPP$8,209, its GDP per capita stands 48 per cent above the WEI average and fourth highest among WEI countries. The economy has been growing at a robust pace, by 5.8 per cent compared to a WEI average of 2.2 per cent and OECD average of 3.2 per cent.

Education participation in Malaysia is almost universal for those aged 5–14 with 97.3 per cent enrolled in the education system. A 5-year-old can expect 12.8 years of education overall, placing Malaysia around the WEI average. The country is, however, out-performed by six WEI countries with lower GDP per capita. The main challenge ahead for Malaysia is to expand participation in upper secondary and tertiary education to meet demographic pressures in the population aged 15–29.

In fact, the country has already taken steps to address the projected increase in education demand. One striking feature of Malaysian education finance patterns is the strong emphasis on capital expenditure. At 22.7 per cent of total expenditure on primary to post-secondary education, it is by far the highest proportion in WEI countries. This level of investment in school infrastructure is more than double the WEI average and almost three times the OECD average. At the tertiary level, the trend is even stronger with 38.3 per cent of total expenditure spent on capital. This high level of investment in education infrastructures translates into above-average public spending on education at 5.7 per cent of GDP, the fifth-highest share among WEI countries. Malaysia spends one quarter of its public budget on education, the second-highest rate among WEI countries.

Upper secondary education in Malaysia remains predominantly a public domain with only 7.9 per cent of students enrolled in private schools, the fourth-lowest proportion among WEI countries and significantly below both the WEI and OECD averages of 23.6 per cent and 18.8 per cent respectively. In secondary public institutions, expenditure per student reaches PPP$1,813, 61 per cent above the WEI average, although it is about average in GDP per capita terms.

The comparatively high level of expenditure per student results from below-average learning conditions where there are 17.9 students per teacher in secondary education while the share of staff compensation relative to total current expenditure is around the WEI average at 80.6 per cent. Teachers' salaries in Malaysia are slightly above the WEI average relative to GDP per capita at 2.43. This should make the expansion of upper secondary and tertiary education participation financially manageable. However, compared with Chile, a country with similar resources and demographic constraints, Malaysia will bear a higher human-resources cost to fund the expansion of its education system.

For data tables see Annex A4.


PARAGUAY
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in secondary education
100
1 127
1 545
6 000
PPP dollars
5 465
Student teacher ratio in secondary education
5
21.7
30.6
40
ratio
14.3
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
70.9
82.9
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
9.3
9.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
127
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
23.6
32.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
8.8
15.6
30
%
12.7
GDP per capita
0
4 384
5 553
22 000
PPP dollars
21 317

PARAGUAY

Prepared with the co-operation of the OECD, UNESCO, Ms. Hilda GONZALEZ GARCETE and Ms. Dalila Noemi ZARZA PAREDES.

• Total population	5.4 million
• Percentage of the population aged 15–19	11%
• GDP growth rate	-0.8%
• Total public expenditure as a percentage of GDP	54.8%
• School expectancy for a 5-year-old	11.8 years

With 11 per cent of its population aged 15–19 in 1999, Paraguay stands at the average level of WEI countries and four percentage points above the OECD average. In Paraguay, however, this age group is expected to grow by 27 per cent in the next 15 years compared to a WEI average increase of 5 per cent. Currently, a 5-year-old in Paraguay can expect 1.4 years of schooling at the upper secondary level, below the WEI average.

In economic terms, Paraguay's GDP per capita of PPP$4,384 places it in the lower end of the range of WEI countries. Coupled with a GDP decrease of 0.8 per cent in 1999, this puts Paraguay in a difficult situation in terms of its ability to mobilize resources for education. This is reflected in its low public expenditure on education as a percentage of total public expenditure, at 8.8 per cent it is almost half the WEI average.

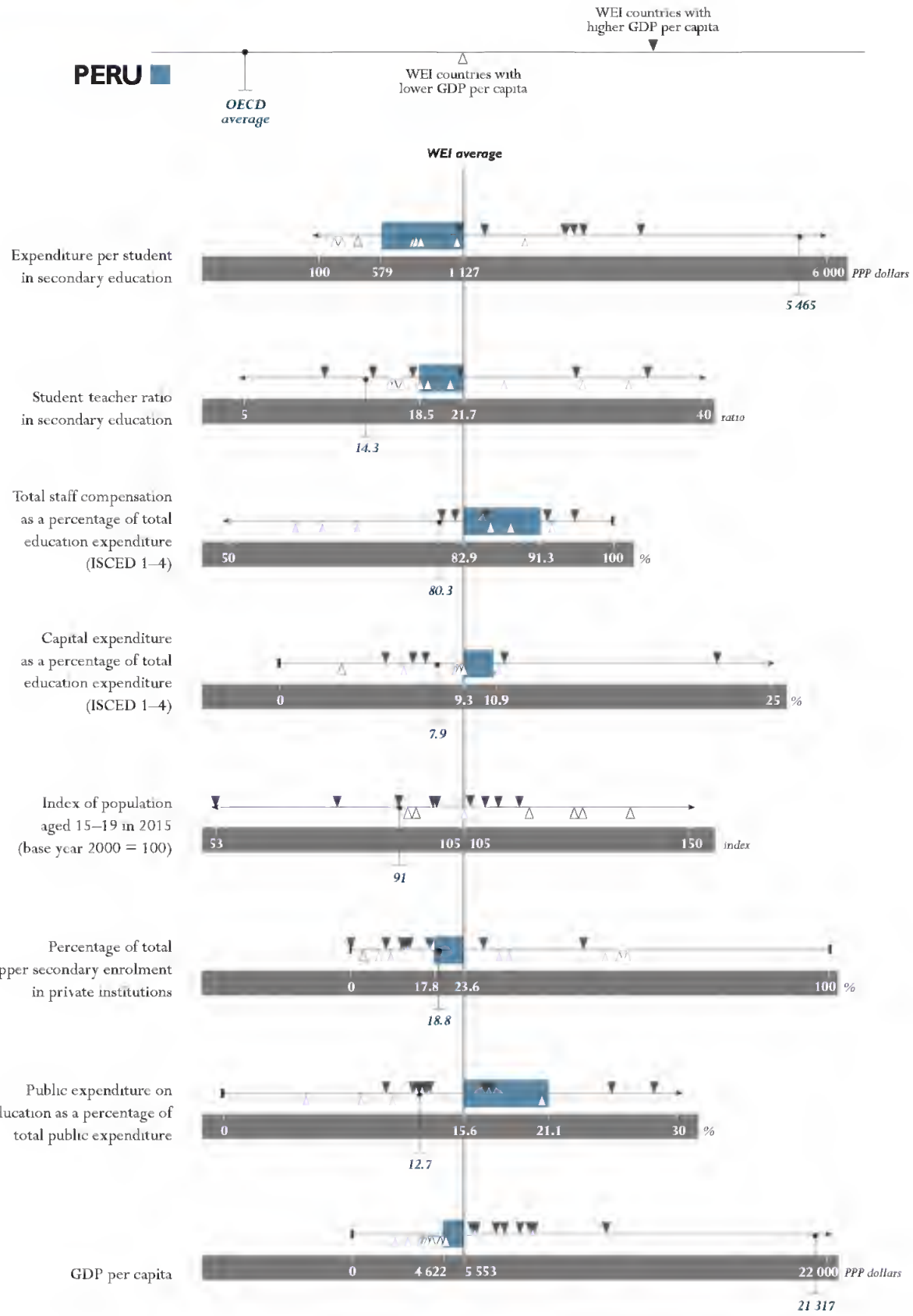
However, despite high demographic pressure and economic recession, the expenditure per student at the secondary level is PPP$1,545, well above the WEI average. In terms of human resources, Paraguay has a student-teacher ratio of 30.6 at the secondary level, much higher than the WEI average and more than twice the OECD ratio.

Capital expenditure as a proportion of total education expenditure places Paraguay at the WEI average, but the proportion of current expenditure Paraguay devotes to staff compensation at primary and secondary levels at 70.9 per cent places it in the lower rankings of WEI countries. The ratio of the average upper secondary teacher's salary to GDP per capita, after 15 years of experience and including all shifts, is the second-highest of all WEI countries at 3.13 and above all OECD countries.

At the upper secondary level, private provision of education in Paraguay at 32.6 per cent is far above the WEI and OECD averages and much higher than in primary and lower secondary. Private sources account for 40.5 per cent of expenditure in primary and secondary educational institutions, second-highest among WEI countries and twice the WEI average.

Given the relatively high level of income disparity in Paraguay and large migration to the cities, extending upper secondary education represents a great challenge for decision-makers. Paraguay began to tackle this huge increase in demand with its *Upper Secondary Reform* initiative in 2002, a follow-up to its reform of basic education. The reform focuses on equity, quality, efficiency, curriculum, teachers and management.

For data tables see Annex A4.


WEI countries with higher GDP per capita
PERU
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in secondary education
100 579 1 127 6 000 PPP dollars
5 465
Student teacher ratio in secondary education
5 18.5 21.7 40 ratio
14.3
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50 82.9 91.3 100 %
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0 9.3 10.9 25 %
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53 105 105 150 index
91
Percentage of total upper secondary enrolment in private institutions
0 17.8 23.6 100 %
18.8
Public expenditure on education as a percentage of total public expenditure
0 15.6 21.1 30 %
12.7
GDP per capita
0 4 622 5 553 22 000 PPP dollars
21 317

PERU

Prepared with the co-operation of the OECD, UNESCO, Mr. José RODRIGUEZ and Ms. Gloria María ZAMBRANO ROZAS.

• Total population	25.5 million
• Percentage of the population aged 15–19	10%
• GDP growth rate	1.4%
• Total public expenditure as a percentage of GDP	15.7%
• School expectancy for a 5-year old	13.3 years

With 10 per cent of its population aged 15–19 in 1999, Peru stands at the average level of WEI countries and above the OECD average of 7 per cent. This share is expected to increase by 5 per cent over the next 15 years, the same as the average increase expected for WEI countries. A 5-year-old can expect 1.4 years of schooling at the upper secondary level, slightly below the WEI average.

In economic terms, Peru has a GDP per capita of PPP$4,622 dollars, slightly below the WEI average, with a growth in GDP of 1.4 per cent. The reduction of central government debt as a percentage of GDP (from 190 per cent in the 1980s to 55 per cent in the 1990s) appears to have had a positive effect on expenditure on education which has grown from 2 per cent of GDP in the 1970s to 3 per cent in the 1990s on average.

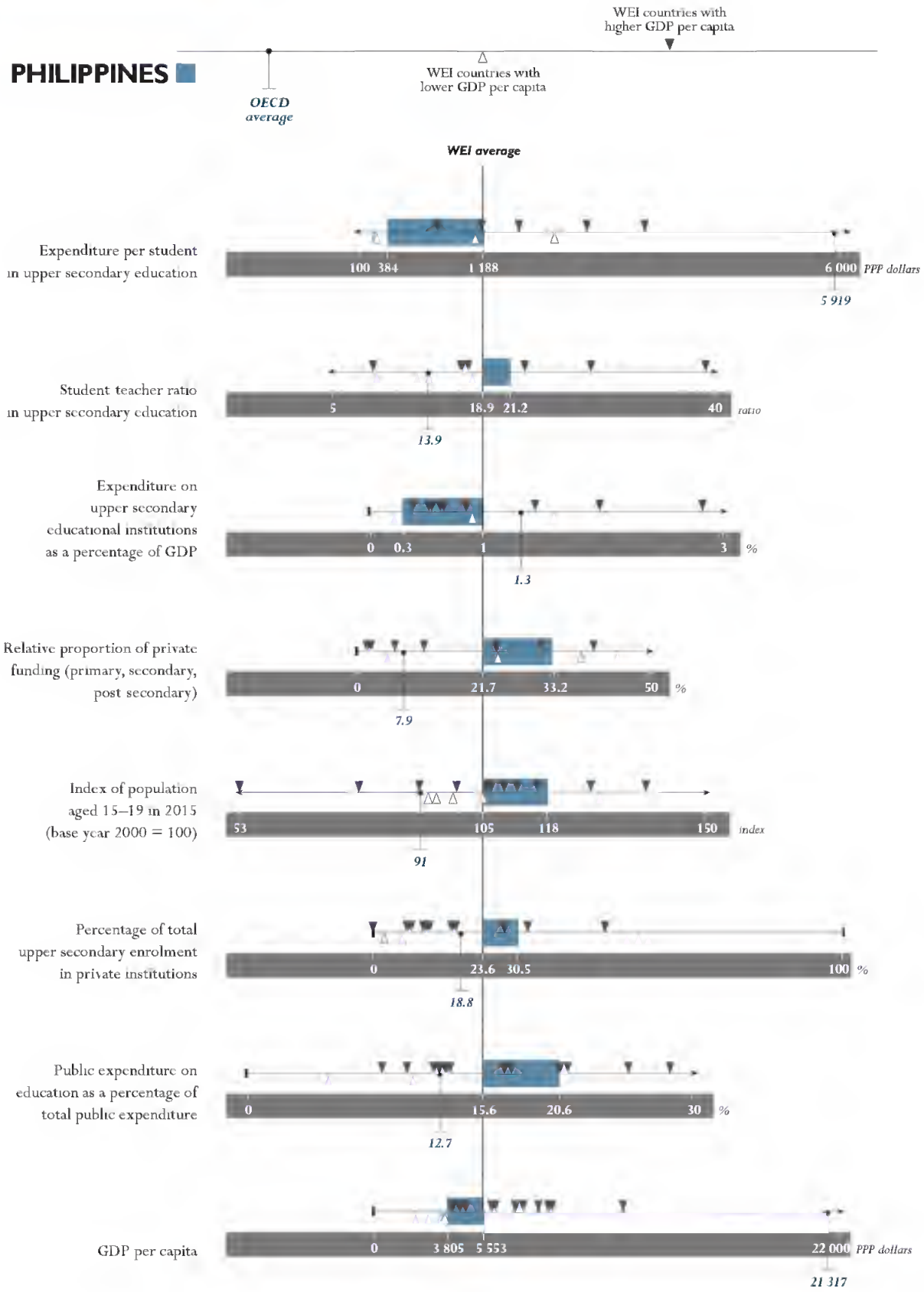
Peru spends 21.1 per cent of its total government expenditure on education which places it not only well above the WEI average but above all OECD countries except Mexico. The high proportion of educational expenditure is not reflected, however, in expenditure per student which is nearly half of the WEI average at the upper secondary level. The share of capital expenditure in total education expenditure is fourth-highest of WEI countries at 10.9 per cent while current expenditure devoted to staff compensation is relatively high at 91.3 per cent compared to other WEI and OECD countries.

In terms of human resources, Peru seems to be well prepared to face greater demand for upper secondary education. It has a relatively low student-teacher ratio of 18.5, below the WEI average. However, the ratio of the average upper secondary teacher's salary, after 15 years of experience, to GDP per capita is one of the lowest among WEI countries at 1.18 compared to the WEI average of 2.10. Also, in Peru primary and upper secondary teachers have the same level of qualifications and salaries.

Private provision of upper secondary education is slightly below the WEI average with 17.8 per cent of students enrolled in private institutions and close to the OECD average of 18.8 per cent. In terms of education finance, private sources account for 23.2 per cent of expenditure on primary and secondary schools, making basic education in Peru still largely public in nature.

For data tables see Annex A4.

PHILIPPINES



PHILIPPINES

Prepared with the co-operation of the OECD, UNESCO, Mr. Ramon BACANI and Ms. Lilia ROCES.

• Total population	72.6 million
• Percentage of the population aged 15–19	11%
• GDP growth rate	3.2%
• School expectancy for a 5-year-old	12 years

The population aged 15–19 in the Philippines is expected to increase by 18 per cent during the period 2000-2015, considerably above the WEI average increase of 5 per cent. In the Philippines, upper secondary education (comprised of just a single year, the last grade of secondary education) is made up exclusively of general programmes and shows a high level of internal efficiency. The graduation rate of 16-year-olds at 66 per cent is almost equal to the entry rate of 15-year-olds at 68 per cent. It is important to note that the typical graduation age at the upper secondary level is 17 or 18 in other WEI countries.

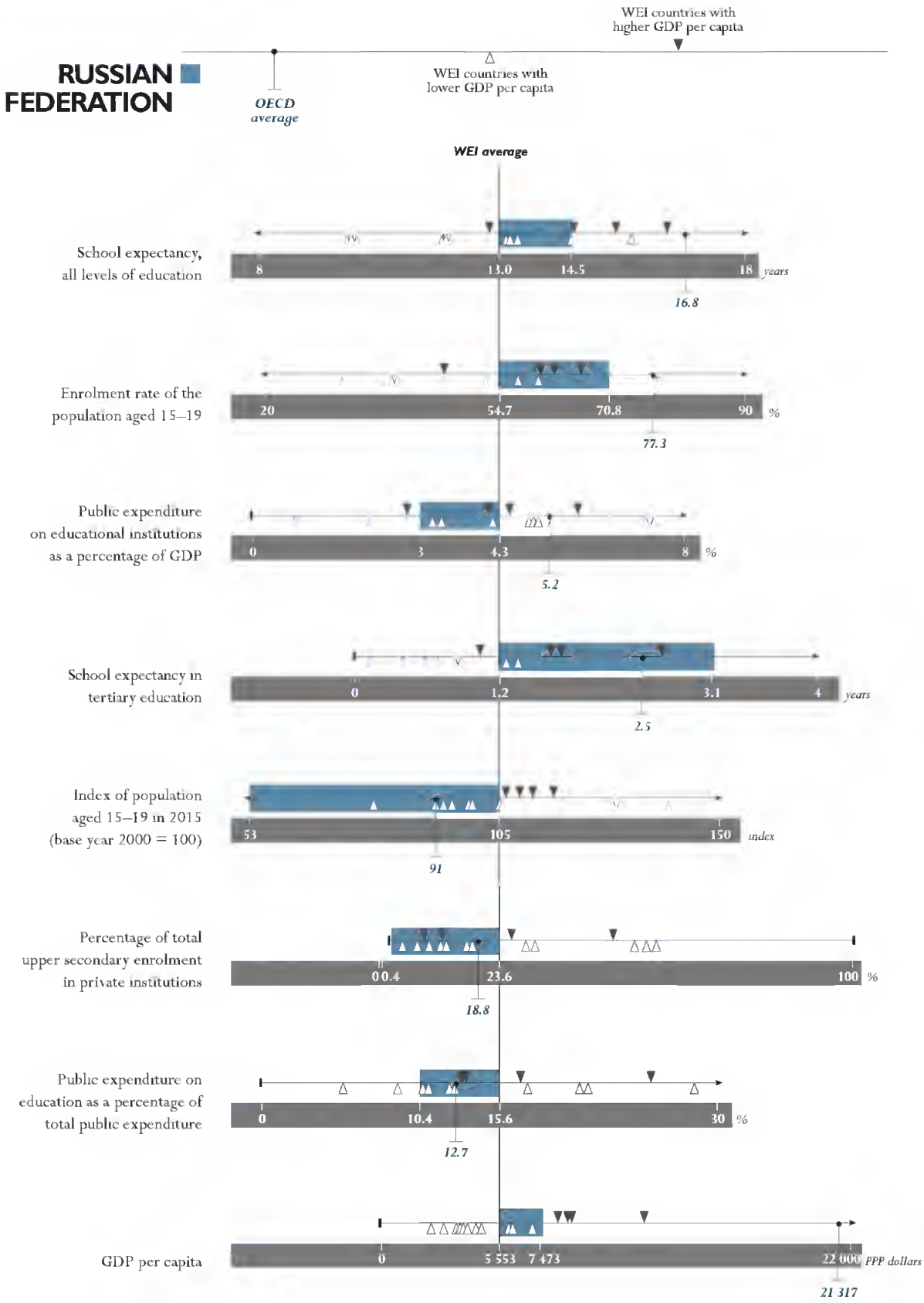
GDP per capita is among the lower third of WEI countries but GDP growth at 3.2 per cent is above the WEI average of 2.2 per cent. While 20.6 per cent of total public expenditure is allocated to education, five percentage points more than the WEI average, the proportion of expenditure on upper secondary educational institutions as a percentage of GDP at 0.3 per cent is the third-lowest of all WEI countries (after India and Indonesia). This translates into a low expenditure per student in upper secondary at PPP$384, far below the WEI average.

There is a higher level of private enrolment at the upper secondary level of education (30.5 per cent in independent institutions, largely in urban areas) than at lower secondary (25.2 per cent) or primary (7.5 per cent) levels. The proportion of private sources in expenditure for primary to post-secondary non-tertiary education is fourth-highest among WEI countries. Central government debt as a percentage of GDP has increased fourfold, from 15 per cent in the 1970s to almost 60 per cent in the 1990s on average. Nonetheless, there has been growing participation by the central government in education since the 1980s.

The question remains whether the Philippines can meet a higher demand for upper secondary education with an adequate teaching force. The current student-teacher ratio of 21.2 at that level is only slightly above the WEI average. Teachers' salaries in public upper secondary schools are relatively attractive with a ratio, after 15 years of experience, to GDP per capita of 3.10, well over the WEI average of 2.10. However, the competitiveness of teachers' salaries in public rural schools (compared with private schools), combined with small school size, can lead to high unit costs. It will, therefore, be interesting to see how the Philippines pursues a mixed public-private strategy to ensure access to upper secondary education regardless of the geographic or socio-economic background of individuals.

For data tables see Annex A4.

RUSSIAN FEDERATION



RUSSIAN FEDERATION

Prepared with the co-operation of the OECD, UNESCO and Mr. Mark AGRANOVITCH.

• Total population	145.0 million
• Percentage of the population aged 15–19	8%
• GDP growth rate	3.2%
• School expectancy for a 5-year-old	14.5 years

In contrast to the vast majority of WEI countries, the Russian Federation's education system faces favourable demographic conditions. The population aged 5–29 is of limited size at 36 per cent of the total population, the smallest proportion among WEI countries. In addition, the next 15 years are expected to bring dramatic decreases with the population aged 5–14 dropping by 38 per cent, the population aged 15–19 falling by 47 per cent and the population aged 20–29 shrinking by 7 per cent.

The projected trends are closer to OECD patterns than WEI scenarios. The demographic shifts, however, do suggest an ageing population which will draw increasingly on the country's financial resources and result in a probable increase in the dependency ratio.

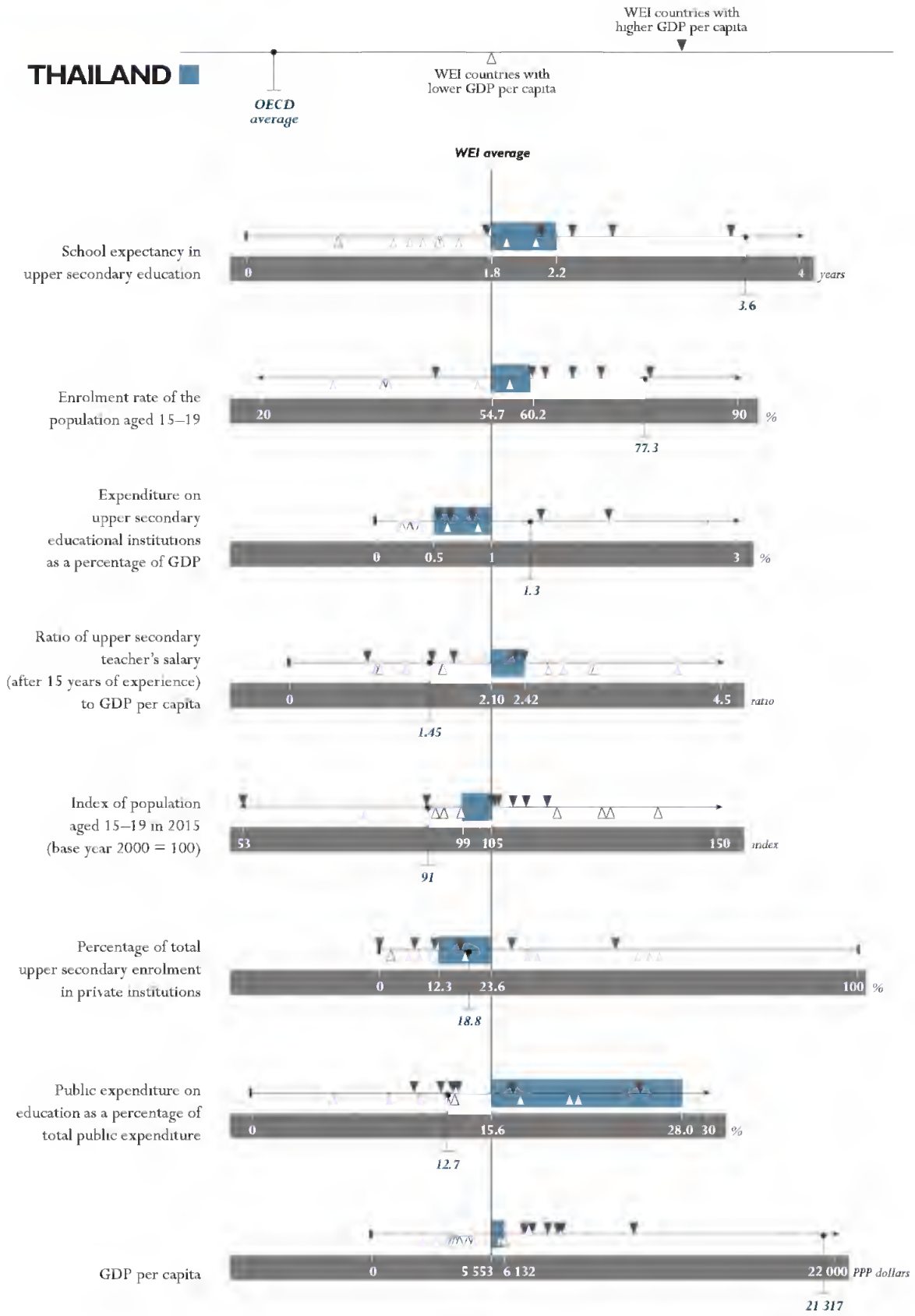
After a decade of transition and a deep economic crisis in 1998, the Russian Federation returned to economic growth with a 3.2 per cent increase in GDP in 1999. It stands at the higher end of the WEI range with a GDP per capita of PPP$7,473. These increased financial resources will be useful in covering the costs associated with an ageing population and may also be able to finance improvements in the education system in coming years.

Participation in education, expressed in school expectancy, is high in the Russian Federation with a 5-year-old expecting14.5 years of schooling, 1.5 years beyond the WEI average. The Russian Federation records the second-highest enrolment rate for 15–19 year-olds among WEI countries at 70.8 per cent and above-average participation at the tertiary level of education. Besides high participation rates, upper secondary education in the Russian Federation is characterized by an almost exclusive public provision. Only 0.4 per cent of students are enrolled in private institutions, the lowest proportion in WEI countries.

This comparatively good performance is achieved at a limited cost relative to GDP. With public spending on education amounting to 3 per cent of GDP, the Russian Federation stands at the lower end of the WEI range. This is, in part, due to the relatively small proportion of youth of school age in the overall population, but public expenditure on education is also nearly half the OECD average despite similar demographic patterns.

Public expenditure on education also appears low relative to the total public budget, at 10.4 per cent among the lowest of WEI countries. This may, however, reflect the comparatively large public sector in the Russian Federation. Another factor behind this comparatively low level of spending on education may be the below-average instruction time of students.

For data tables see Annex A4.


THAILAND
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
School expectancy in upper secondary education
0
1.8
2.2
4
years
3.6
Enrolment rate of the population aged 15–19
20
54.7
60.2
90
%
77.3
Expenditure on upper secondary educational institutions as a percentage of GDP
0
0.5
1
3
%
1.3
Ratio of upper secondary teacher's salary (after 15 years of experience) to GDP per capita
0
2.10
2.42
4.5
ratio
1.45
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
99
105
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
12.3
23.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
15.6
28.0
30
%
12.7
GDP per capita
0
5 553
6 132
22 000
PPP dollars
21 317

THAILAND

Prepared with the co-operation of the OECD, UNESCO and Ms. Sirivarn SVASTIWAT.

• Total population	61.6 million
• Percentage of the population aged 15–19	9%
• GDP growth rate	4.2%
• Total public expenditure as a percentage of GDP	17.5%
• School expectancy for a 5-year-old	13.1 years

With 44 per cent of its population aged 5-29, Thailand stands at the lower end of the WEI range in terms of educational demand. The population aged 20-29 is, however, slightly above the WEI average at 19 per cent. Most importantly, the populations aged 5-14 and 15–19 are expected to stabilize over the next 15 years, while the population aged 20-29 will decrease by 8 per cent.

Thailand stands 10 per cent above the WEI average with a GDP per capita of PPP$6,132 in 1999. It has resumed economic growth in the aftermath of the Asian financial crisis with a 4.2 per cent increase in GDP. Thus general economic and demographic conditions in Thailand appear relatively favourable for the education system.

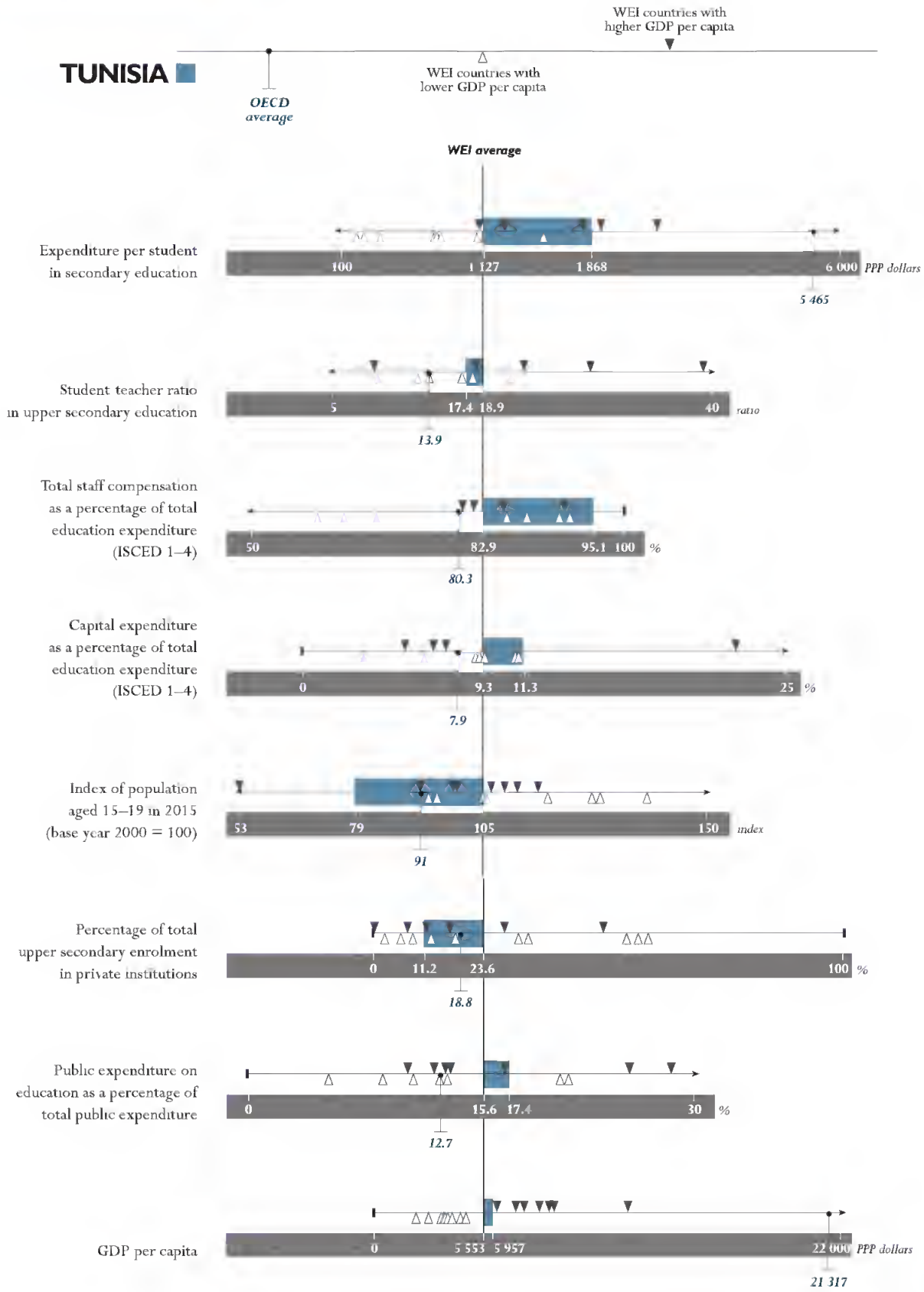
Education participation in Thailand is above average with nearly universal participation of those aged 5–14. Thailand also records the highest enrolment rate for 15–19 year-olds among Asian WEI countries at 60.2 per cent, 5.5 percentage points above the WEI average. These above-average enrolment rates translate into higher school expectancy. A 5-year-old in Thailand has the prospect of 13.1 years of schooling, including 2.2 years at the upper secondary level – the fourth-highest performance among WEI countries and better than two other WEI countries with higher resources per capita.

This comparatively good performance is achieved at a moderate cost. Thailand spends 4.7 per cent of its GDP on education, at the lower end of the WEI range. Another noteworthy feature is the strong involvement of the state in education finance: private sources account for only 5.4 per cent of all expenditure on education, the second-lowest proportion among WEI countries.

Education is clearly a government priority in Thailand. The share of total public expenditure spent on education is 28 per cent, the highest proportion among WEI countries, nearly twice the WEI average and far above the OECD average of 12.7 per cent. This situation also reflects the relatively small size of the public sector in Thailand at only 17.5 per cent of GDP, which puts the country in the lower ranks of WEI countries in this regard.

At the upper secondary level of education, expenditure on education relative to GDP is 0.5 per cent, a low proportion given the high rate of enrolment at that level and compared to the WEI and OECD averages of 1.0 per cent and 1.3 per cent respectively. This situation is all the more striking given the above-average level of mid-career teachers' salaries, both in absolute terms and relative to GDP per capita, and comparatively low teaching hours. Since teachers' salaries increase substantially with years of experience, a younger teaching force could result in a significant decrease in cost to the education system.

For data tables see Annex A4.


TUNISIA
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in secondary education
100
1 127
1 868
6 000
PPP dollars
5 465
Student teacher ratio in upper secondary education
5
17.4
18.9
40
ratio
13.9
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
82.9
95.1
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
9.3
11.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
79
105
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
11.2
23.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
15.6
17.4
30
%
12.7
GDP per capita
0
5 553
5 957
22 000
PPP dollars
21 317

TUNISIA

Prepared with the co-operation of the OECD, UNESCO and Mr. Mohsen KTARI.

• Total population	9.4 million
• Percentage of the population aged 15–19	11%
• GDP growth rate	6.2%
• School expectancy for a 5-year-old	13.2 years

Tunisia's demographic context is challenging with the population aged 5–29 comprising 51 per cent of the total population. A demographic change is, however, underway with the populations aged 5–14 and 15–19 expected to decrease over the next 15 years by 8 per cent and 21 per cent respectively. The main challenge for the education system in the mid-term will be to extend education participation at the tertiary level in spite of an expanding population in this age range.

Economic conditions in Tunisia have improved significantly. Despite a GDP per capita just slightly above the WEI average at PPP$5,957 in 1999, the country has the third-highest rate of economic growth of WEI countries at 6.2 per cent. This growth can provide additional resources to respond to an education demand that is higher than the WEI average. Tunisia will, indeed, have to expand access to and participation in education beyond its current level in order to catch up with top-performing WEI countries and neighbouring OECD countries. A 5-year-old in Tunisia can currently expect to spend 13.2 years in education, slightly more than the WEI average but more than two and a half years less than neighbouring France and Italy.

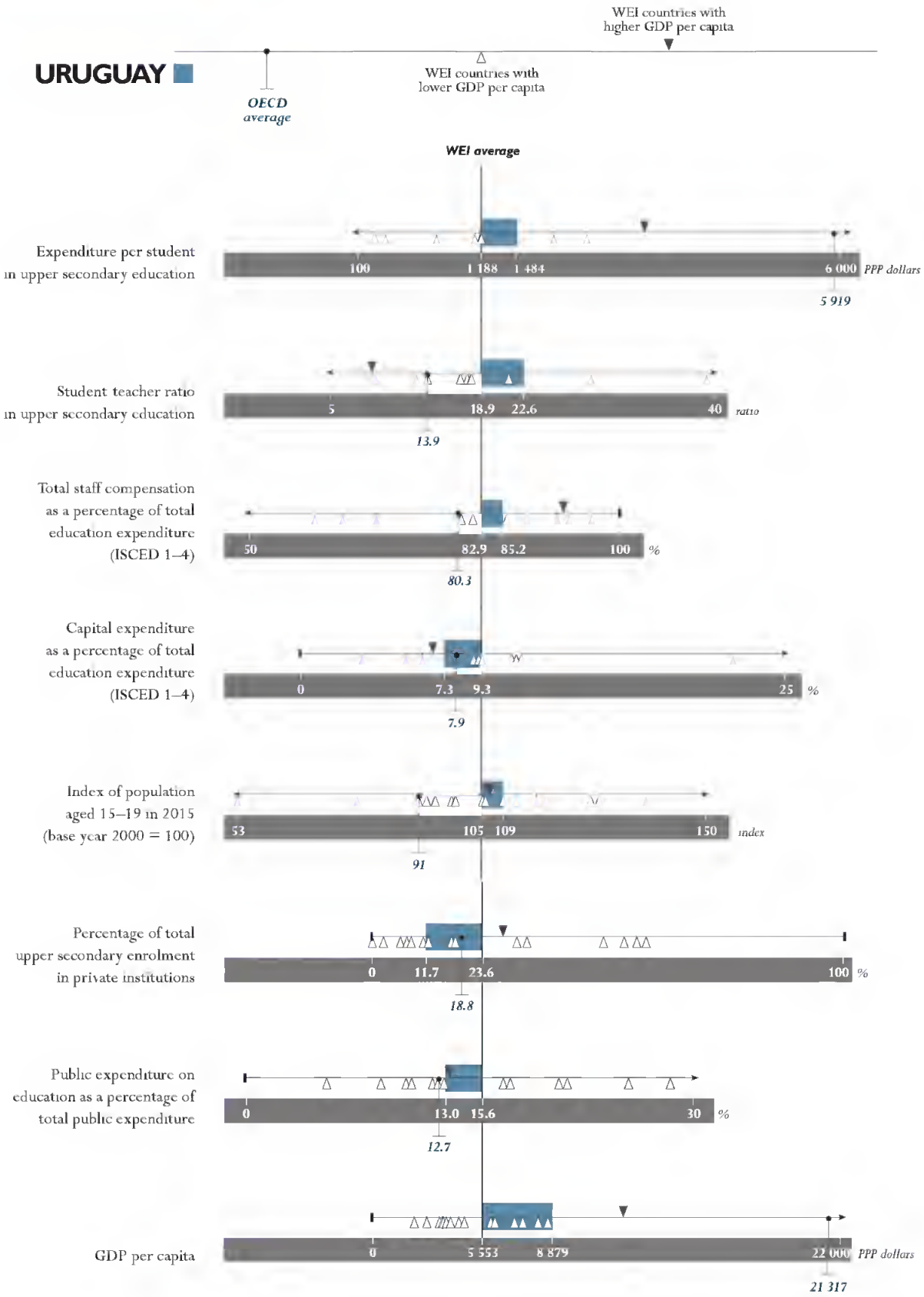
Given demographic trends, the country must mobilize enormous resources in order to provide universal access to primary and lower secondary education, and to expand participation in upper secondary and tertiary education. The task appears all the more challenging given the current high level of public investment in education. At 6.8 per cent of GDP, Tunisia is the second-highest-spending WEI country in terms of public financing of education. Expenditure on education as a share of total public expenditure is also significantly above the WEI and OECD averages – 17.4 per cent compared to 15.6 per cent and 12.7 per cent respectively.

Expanding education participation requires substantial capital investment and Tunisia is already the second-highest-spending WEI country in this regard with 11.3 per cent of total education expenditure devoted to infrastructure at the primary and secondary levels of education. In order to alleviate demands on the public purse, the government has taken steps to promote private investment through a set of incentives tied to newly created private institutions.

At the upper secondary level, private provision of education remains low, accounting for only 11.2 per cent of enrolment, less than half the WEI average. In terms of public secondary schools, the high level of overall investment in education in Tunisia translates into the third-highest expenditure per student at this level among WEI countries – at PPP$1,868 outperforming three other WEI countries with higher GDP per capita.

Besides big investments in capital infrastructure, Tunisia's high level of education spending results from high teacher salaries. At four times the GDP per capita, mid-career upper secondary teachers' salaries are the highest among WEI countries in relative terms. As a result, staff compensation accounts for 95.1 per cent of current expenditure at the primary and secondary levels of education, the highest proportion in WEI countries. The relatively high cost of salaries at the upper secondary level is reinforced by below-average teaching hours and student-teacher ratio.

For data tables see Annex A4.


URUGUAY
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in upper secondary education
100
1 188
1 484
6 000
PPP dollars
5 919
Student teacher ratio in upper secondary education
5
18.9
22.6
40
ratio
13.9
Total staff compensation as a percentage of total education expenditure (ISCED 1–4)
50
82.9
85.2
100
%
80.3
Capital expenditure as a percentage of total education expenditure (ISCED 1–4)
0
7.3
9.3
25
%
7.9
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
109
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
11.7
23.6
100
%
18.8
Public expenditure on education as a percentage of total public expenditure
0
13.0
15.6
30
%
12.7
GDP per capita
0
5 553
8 879
22 000
PPP dollars
21 317

URUGUAY

Prepared with the co-operation of the OECD, UNESCO and Ms. Mara PEREZ DE TORRANO.

• Total population	3.3 million
• Percentage of the population aged 15–19	8%
• GDP growth rate	-3.2%
• Total public expenditure as a percentage of GDP	21.2%
• School expectancy for a 5-year-old	15.4 years

The population aged 15–19 in Uruguay is expected to increase by 9 per cent during the period 2000–2015. With an enrolment rate of 60.7 per cent for this age group, Uruguay is above the WEI average of 54.7 per cent but well below the OECD average of 77.3 per cent.

Uruguay has the second-highest GDP per capita among WEI countries, at PPP$8,879 just behind Argentina and higher than Turkey, Mexico and Poland in the OECD. Like other MERCOSUR countries, Uruguay is in economic crisis with a 3.2 per cent decrease in its GDP growth rate, identical to the decline recorded by neighbouring Argentina.

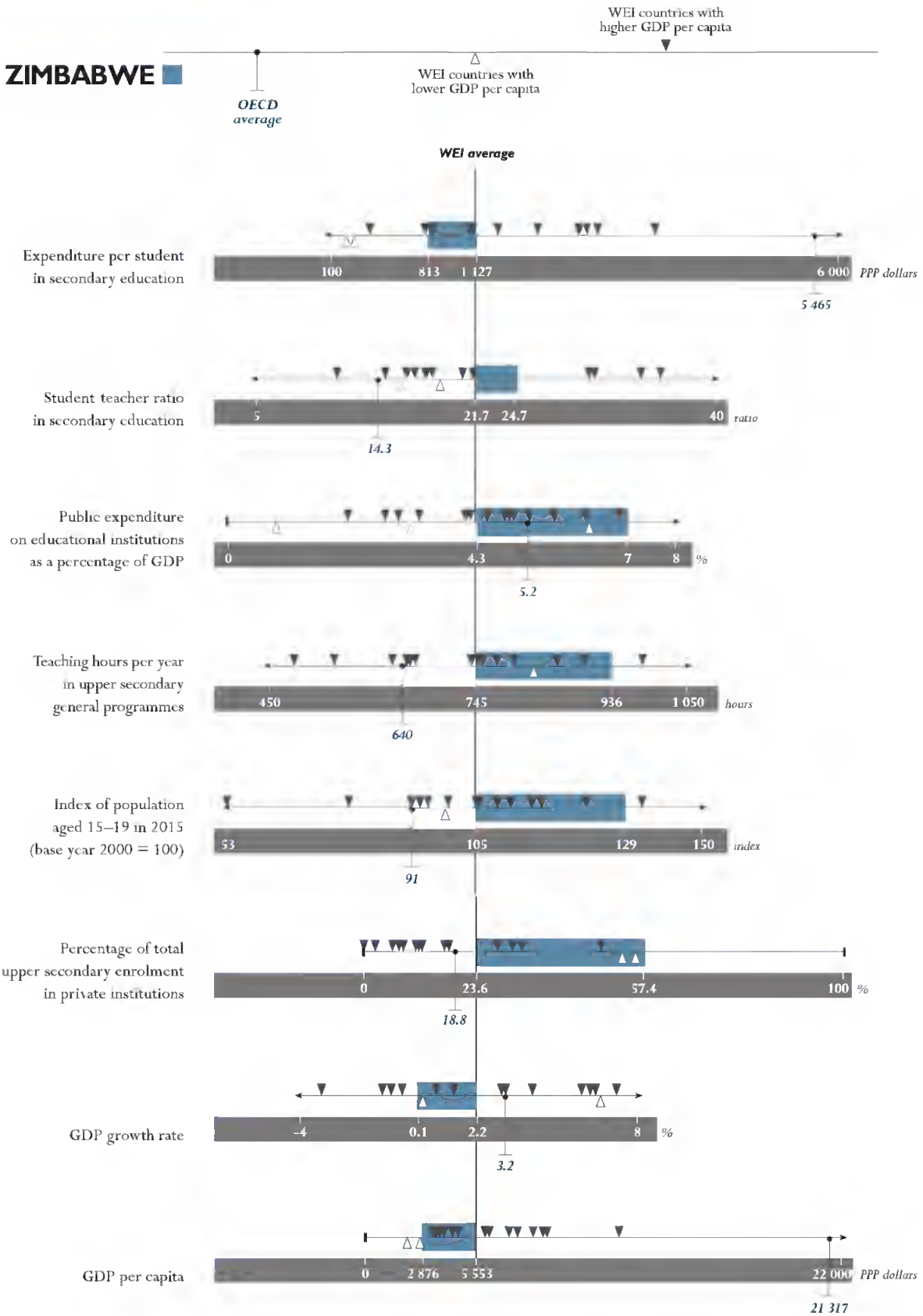
At 13 per cent, public expenditure on education as a percentage of total public expenditure in Uruguay is below the WEI average but very close to the OECD average. As a percentage of total education expenditure, capital investment in primary, secondary and post-secondary non-tertiary combined is 7.3 per cent, less than the WEI average of 9.3 per cent. The expenditure per student in upper secondary education is PPP$1,484, putting it above the WEI average.

In terms of human resources, 85.2 per cent of current education expenditure is devoted to staff compensation in primary and secondary institutions, making it slightly higher than the WEI average. The student-teacher ratio in upper secondary education is the third-highest of WEI countries at 22.6. It is worth noting that most teachers in Uruguay hold two positions.

With increasing demographic pressure in the upper secondary age group, an economic crisis, relatively low capital expenditure and relatively low teacher supply, Uruguay faces an uphill climb to meet the demand for upper secondary education in the coming years.

Uruguay's education finance system is fully centralized and private institutions do not receive funding from the government. However, the development of private institutions may be an avenue for further developing tertiary education in this country. With only 11.6 per cent of students enrolled in tertiary Type A programmes attending private institutions and 9 per cent of students in tertiary Type B programmes in private schools, Uruguay has the second-lowest proportion of private enrolment at this level among WEI countries, well below both the WEI and OECD averages.

For data tables see Annex A4.


ZIMBABWE
WEI countries with higher GDP per capita
WEI countries with lower GDP per capita
OECD average
WEI average
Expenditure per student in secondary education
100
813
1 127
6 000
PPP dollars
5 465
Student teacher ratio in secondary education
5
21.7
24.7
40
ratio
14.3
Public expenditure on educational institutions as a percentage of GDP
0
4.3
7
8
%
5.2
Teaching hours per year in upper secondary general programmes
450
745
936
1 050
hours
640
Index of population aged 15–19 in 2015 (base year 2000 = 100)
53
105
129
150
index
91
Percentage of total upper secondary enrolment in private institutions
0
23.6
57.4
100
%
18.8
GDP growth rate
-4
0.1
2.2
8
%
3.2
GDP per capita
0
2 876
5 553
22 000
PPP dollars
21 317

ZIMBABWE

Prepared with the co-operation of the OECD, UNESCO and Mr. Farai CHOGA.

• Total population	12.5 million
• Percentage of the population aged 15–19	12%
• GDP growth rate	0.1%
• School expectancy for a 5-year-old	12.0 years

Zimbabwe's education system operates in a very difficult environment. With 57 per cent of its population aged 5–29, the second-highest proportion among WEI countries, and one quarter of its population aged 5–14, Zimbabwe already faces a large demand for education. In addition, the next 15 years will see the population of these age groups increase dramatically. Zimbabwe is projected to record the second-highest population increase for 5–14 year-olds among WEI countries – 16 per cent. The increases will be even greater for the populations aged 15–19 and 20-29 – 29 per cent and 56 per cent respectively.

This difficult demographic outlook is further aggravated by unpromising economic conditions. Zimbabwe's GDP per capita of PPP$2,876 in 1999 is among the lowest of WEI countries. Furthermore, Zimbabwe has recorded only 0.1 per cent growth in its GDP in 1999, insufficient to compensate for the projected rate of population growth. The education system in Zimbabwe thus faces very strong demographic pressures with decreasing national financial resources.

Participation in education in Zimbabwe is lower than in most other WEI countries. A 5-year-old can currently expect 12 years of education, one year below the WEI average, but still more than in three other WEI countries with higher resources per capita. Another notable feature is the lower participation of females in education: school expectancy for 5-year-old girls is almost one year shorter than for their male peers. Yet, Zimbabwe manages to enrol more than 8 out of 10 children aged 5–14. This apparently good performance may mask high levels of repetition.

Educating such a large school-age population comes at a cost. Zimbabwe spends a larger share of its GDP on education than any other WEI or OECD country. It devotes 7 per cent of its GDP to education compared to a WEI average of 4.3 per cent and OECD average of 5.2 per cent. Still, public resources are inadequate to support all students and the private sector plays a strong role in the provision of education. At the upper secondary level, 57.4 per cent of students are enrolled in government-dependent private schools, a greater share than in any other WEI country.

At the secondary level of education, expenditure per student in public schools amounts to PPP$813, placing Zimbabwe 28 per cent below the WEI average but out-performing three WEI countries with higher resources per capita. In fact, expenditure per student is nearly four times what it is in Indonesia, a country with almost identical GDP per capita. Teaching conditions in Zimbabwe are characterized by above-average student-teacher ratios, which makes it difficult to reduce unit costs by increasing those ratios.

The main challenge, therefore, for Zimbabwe in coming years is to expand access to and participation in education at a manageable cost.

For data tables see Annex A4.

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ANNEXES

These annexes provide the data used in this publication as well as important information on the definitions and methods underlying these data. The full documentation of national data sources and calculation methods is published in the OECD 2002 edition of *Education at a Glance* and on the OECD web site:

www.oecd.org/els/education/eag2002

Five annexes are presented:

- **Annex A1** provides general notes pertaining to the coverage of the data, the reference periods and the main sources for the data.
- **Annex A2** provides definitions and technical notes that are important for the understanding of the indicators presented in this publication. (The notes are organized alphabetically.)
- **Annex A3** provides a cross-reference between data tables and technical notes.
- **Annex A4** provides the full set of data tables used in this publication.
- **Annex A5** documents the classification of 19 WEI countries' educational programmes according to the 1997 International Standard Classification of Education (ISCED97).

ANNEX A1 – GENERAL NOTES

Coverage

Although a shortage of data still limits the scope of some indicators in many WEI countries, the coverage extends, in principle, to the entire national education system regardless of the ownership or sponsorship of the institutions concerned and regardless of education delivery mechanisms.

With one exception described below, all types of students and all age groups are meant to be included: children (including those classified as exceptional), adults, nationals, foreigners, as well as students in open distance learning, special education programmes or educational programmes organized by ministries other than the Ministry of Education provided the main aim of the programme is the educational development of the individual. Vocational and technical training in the workplace, with the exception of combined school and work-based programmes that are explicitly deemed to be part of the education system, are not included in the basic education expenditure and enrolment data.

Educational activities classified as 'adult' or 'non-regular' are covered provided that the activities involve studies or have subject-matter content similar to 'regular' education studies or that the underlying programmes lead to potential qualifications similar to corresponding regular educational programmes. Courses for adults that are primarily for general interest, personal enrichment, leisure or recreation are excluded.

Reference periods

Unless specified otherwise in indicator table notes, the reference year for all data on entry, enrolment, completion and education personnel is the school year 1999/2000 for both WEI and OECD countries. The reference year for the financial data is the calendar year 1999 for both WEI and OECD countries. Where the financial data year does not coincide with this target reference period, GDP and total public expenditure data have been adjusted accordingly.

Data on national expenditure in this publication have been converted using World Bank *World Development Indicators* purchasing power parities (PPPs).

Sources

Most numerical data used in this report are based on annual WEI/UOE data collection. Government officials in OECD and WEI countries provide these data annually to the OECD and UNESCO Institute for Statistics in detailed and highly structured electronic questionnaires. These questionnaires consist of several electronic workbooks organized by topic – demographic background, education finance, enrolments, entrants, graduates, curriculum and personnel.

Sources used by government officials to complete the electronic questionnaires consist most often of labour force surveys, population censuses or, in the case of the demographic background and educational attainment data, population projections based on censuses. In most cases, education system records, such as school censuses, provide the data on enrolments, entrants, graduates, curriculum and personnel. Education finance data often come from sources outside education ministries such as government ministries that specialize in finance.

Additional financial and economic background data used in this report come from World Bank databases, some of which are published in its *World Development Indicators* publication. Specific indicators borrowed from World Bank databases include purchasing power parity indices and gross domestic product (GDP) per capita.

National data sources are:

Argentina

Ministry of Education, 1999 school census and university statistics.

Brazil

Ministry of Education, National Institute for Educational Studies and Research *(INEP)*, 1999 and 2000 school censuses, 1999 and 2000 tertiary education censuses.

National Bureau of Statistics *(IBGE)*, Office of National Accounts (*DECNA*) and 1999 National Household Survey (*PNAD*).

Federal law and 1988 Brazilian constitution.

Chile

Ministry of Education, enrolment and achievement databases (ISCED 1–3), higher education division (ISCED 5–7), *JUNJI* and *INTEGRA* (ISCED 0).

Institute of National Statistics (*INE*).

Central Bank, national accounts.

China

Ministry of Education, Department of Development and Planning, *Educational Statistics Yearbook of China*, 1999.

Ministry of Personnel Survey.

State Education Commission, *The References of Curriculum for Compulsory Education*, Beijing Normal University Press, 1992.

National Bureau of Statistics, *China Population Statistics Yearbook*, 2000, social science and technology statistics 2000.

Egypt

Ministry of Education, 1999 school census.

India

National Institute of Educational Planning and Administration, *Analysis of Budgeted Expenditure on Education 1998/99 to 2000/01* and *Education in India*, vol. II(S).

Department of Education, Planning and Monitoring Unit, *Analysis of Budgeted Expenditure on Education 1997–2000.*

Indonesia

Ministry of Education, school statistics.

Jamaica

Ministry of Education, Youth and Culture.

Statistical Institute of Jamaica.

Jordan

Ministry of Education, *Statistical Yearbook 1999/2000, Educational Statistical Report 1999/2000,* ministry regulations 1999/2000, budget law 5f 2001.

Civil service law (1998).

Malaysia

Ministry of Education, Education Planning and Resources Division (*EPRD*), Teacher Education Division (*TED*), Technical and Vocational Education Department (*TVED*), Higher Education Department (*HED*), Private Education Department (*PED*), Royal Military College (*RMC*), Manpower Department (*MPD*), Council of Trust of the Indigenous People (*MARA*), Social Welfare Department (*KEMAS*).

JPA, PTPTN, TNB, TELEKOM, BOMBA, JAPIM, JPN, JTR, KBS, PDRM, PERTANIAN, HIED, PPK, BS 2001, *BPOP* 2001, *JPS, JPT, ATM.*

Paraguay

Ministry of Education and Culture, *Education Statistics Yearbook*, 1999, statistics and information statistics database 1999, studies programme for 1st, 2nd and 3rd cycles, 1999 school calendar, 1999 budget of expenditures.

National General Budget of Expenditures 1999.

Office of the President of the Republic, Technical Planning Secretariat, General Direction of Census and Statistics (*DGEEC*).

Peru

Ministry of Education, 1999 and 2000 school censuses, basic curricular structure for primary education, legislation on education *(Reglamento de los Niveles de Educación, Normas para la gestión y desarrollo de actividades para los centros y programas educativos, Reglamento de los Niveles de Educación* and *Ley del profesorado).*

National Statistics and Computer Science Institute (*INEI*), 1999 and 2000 national household surveys (*ENNIV*), 1999 *Financial and Economic Private School Survey,* demographic estimations.

Ministry of Finance (*MEF*), 1999 public sector budget.

Central Bank of Peru, statistics on government expenditure.

Philippines

Department of Education, Culture and Sports (*DECS*), statistical bulletin 1998-99, *Order No. 5* 1998, *Qualification Standards Manual for Unique Positions* 1995, *Order No. 161* 1994, *Order No. 1* 1993, *Order No. 105* 1992.

Commission on Higher Education (*CHED*), statistical bulletin 1998-99.

Technical Education and Skills Development Authority (*TESDA*), statistical bulletin 1998-99.

Department of Labor and Employment, Bureau of Labor and Employment Statistics, *1998 Yearbook of Labor Statistics.*

1995 Census, national, regional and provincial population projections.

Republic Act 8522, General Appropriations Act – FY 1998.

Russian Federation

Ministry of Education, Centre for Monitoring and Statistics of Education.

Thailand

Office of the National Education Commission.

Tunisia

Ministry of Education.

Ministry of Economic Development.

National Institute of Statistics.

Uruguay

Ministry of Education and Culture, Education Division, Statistics Department.

National Institute for Statistics (*INE*).

Zimbabwe

Ministry of Education, Sport and Culture.

For a full documentation of national data sources and calculation methods for the OECD countries, refer to the OECD 2002 edition of *Education at a Glance* or the OECD web site: www.oecd.org/els/education/eag2002

ANNEX A2 – DEFINITIONS, METHODS AND TECHNICAL NOTES

Class size (Table 31)

The class size presented in the indicators is not an empirical class size but a theoretical constructed figure. It represents the class size or group size to be expected under the formal regulations in the educational systems given observed student-teacher ratios. It is estimated as student-teacher ratio multiplied by intended instruction time for students divided by the statutory teaching time.

Current and capital expenditure (Table 18)

The distinction between current and capital expenditure is the standard one used in national accounting.

Current expenditure is expenditure on educational institutions' goods and services, consumed within the current year, that needs to be made recurrently to sustain the production of educational services. Minor expenditure on items of equipment, below a certain cost threshold, is also reported as current spending.

Capital expenditure represents the portion of expenditure on educational institutions' capital assets acquired or created during the year in question, i.e. the amount of capital formation, regardless of whether the capital outlay was financed from current revenue or by borrowing. Capital expenditure includes outlays on construction, renovation and major repair of buildings, and expenditure for new or replacement equipment. Although capital investment requires a large initial expenditure, the plant and facilities have a lifetime that extends over many years. Capital expenditure does not include debt servicing.

Earnings (Table 8)

Average earnings from work are annual money wages received as direct payment for labour services provided before deductions are made for personal income taxes and contributions to health insurance, unemployment, retirement pension and other schemes. Earnings include remuneration for time not worked such as annual leave, holidays, sick leave and maternity leave, while payments in kind and services are excluded. Work-related earnings of self-employed persons are also included.

Income from other sources, such as government social transfers, investment income, net increase in value of an owner-operated business and any other income not directly related to work are not included. Employers' contributions to health insurance, unemployment, pension and other schemes are also not included.

Educational attainment (Tables 3–8)

The levels of educational attainment present the highest level of education, defined according to ISCED97 (Annex A5), completed by people in different subgroups of the total population (e.g. age groups, labour force, unemployed). Note that many educational programmes cannot be easily classified and the contents of a specific ISCED level may differ between countries and even within countries over time and between age groups.

Educational institution (Tables 9–18, 23, 28, 31, 33–35)

Educational institutions are defined as entities that provide instructional services to individuals or education-related services to individuals and other educational institutions. Whether or not an entity qualifies as an educational institution is not contingent upon which public authority (if any) has responsibility for it.

Educational institutions are subdivided into instructional educational institutions and non-instructional educational institutions, the latter being of special importance for comparable coverage of the data on educational finance. The term 'instructional' is used simply to imply the direct provision of teaching and learning.

Instructional educational institutions are those that provide individuals with educational programmes that fall within the scope of the WEI/UOE data collection. In this report, the generic term 'school' is often used to refer to instructional institutions at the primary, secondary and post-secondary non-tertiary levels, and 'university' to those at the tertiary level.

Non-instructional educational institutions are educational institutions that provide administrative, advisory or professional services, frequently for other educational institutions. Non-instructional educational institutions include the following:

- Entities administering educational institutions, including institutions such as national, state and provincial ministries or departments of education; other bodies that administer education at various levels of government and analogous bodies in the private sector (e.g. diocesan offices that administer Catholic schools and agencies administering admissions to universities).
- Entities providing support services to other educational institutions, including institutions that provide educational support and materials as well as operation and maintenance services for buildings. These are commonly part of the general purpose units of public authorities.
- Entities providing ancillary services, covering separate organizations that provide such education-related services as vocational and psychological counselling, placement, transportation of students, and student meals and housing. In some countries, housing and dining facilities for tertiary students are operated by private organizations, usually non-profit, that may be subsidized out of public funds.
- Institutions administering student-loan or scholarship programmes.
- Entities performing curriculum development, testing, educational research and educational policy analysis.

Educational institutions are subdivided into public and private educational institutions.

Educational personnel (Tables 18, 31, 33–35)

Educational personnel includes staff employed in both public and private schools and other educational institutions. Educational personnel is subdivided into *teacher* and *other personnel* categories. The latter comprises teachers' aides, teaching/research assistants and non-instructional personnel.

Teachers' aides and teaching/research assistants include non-professional personnel or students who support teachers in providing instruction to students.

Non-instructional personnel comprises four categories:

- *Professional support* for students includes professional staff who provide services to students that support their learning. This category also includes all personnel employed in education systems who provide health and social support services to students, such as guidance counsellors, librarians, doctors, dentists, nurses, psychiatrists and psychologists and other staff with similar responsibilities.
- *School and higher level management* include professional personnel who are responsible for school management and administration and personnel whose primary responsibility is the quality control and management of higher levels of the education system.
- *School and higher level administrative personnel* include all personnel who support the administration and management of schools and of higher levels of the education system.
- *Maintenance and operations* personnel include personnel who support the maintenance and operation of schools, the transportation of students to and from school, school security and catering.

Entry rate (Tables 24, 27)

Gross entry rates are the ratio of all new entrants, regardless of age, to the size of the population at the typical age of entry (multiplied by 100). Gross entry rates are more easily influenced by differences in the size of population by single year of age, however, data requirements for the calculation of gross rates are lower and, therefore, more countries can provide the necessary data. Since entry to lower and upper secondary school takes place within a narrower age band than entry to tertiary education, demographic changes are less important at those levels.

Net entry rate of a specific age, used for tertiary education, is obtained by dividing the number of new entrants to the university level of that given age by the total population in the corresponding age group (multiplied by 100). The sum of net entry rates is calculated by adding the net entry rates for each single year of age. The result represents the proportion of persons of a synthetic age cohort who enter the tertiary level of education, irrespective of changes in the population sizes and differences between countries in the typical entry age. The sums of net entry rates are more robust against demographic factors, such as changes in the cohort sizes of the ages of entrants. Since entry to tertiary education takes place within a wider age band, these rates are a more preferable measure than gross rates.

Expenditure on educational institutions (Tables 9–18)

Expenditure on educational institutions covers expenditure on public and private educational institutions. It covers expenditure by institutions from all sources, public, private and international. However, educational institutions are, in many countries, embedded in wider institutional arrangements (e.g. general purpose units of local governments, institutions that provide both education-related services as well as child-care services). Expenditure on educational institutions is thus defined by the functions of specific expenditure.

Included in expenditure on educational institutions are: expenditure on instruction and provision of educational goods by institutions (books, materials); training of apprentices and other participants

in mixed school and work-based educational programmes at the workplace; administration; capital expenditure and rent; provision of ancillary services (student transportation, school meals, student housing, boarding); provision of guidance, student health services and special educational needs; provision of services for the general public provided by educational institutions; educational research and curriculum development; and research and development performed at higher education institutions.

Conversely, this category excludes expenditure on: childcare or day care provided by schools and other instructional institutions; educational activities outside the scope of the WEI/UOE data collection; teaching hospitals; and debt servicing.

Direct public expenditure on educational institutions may take one of two forms: purchases by the government agency itself of educational resources to be used by educational institutions (e.g. direct payment of teachers' salaries by a central or regional education ministry); or payments by the government agency to educational institutions that have responsibility for purchasing educational resources themselves (e.g. a government appropriation or block grant to a university which the university then uses to compensate staff and buy other resources).

Direct private expenditure on educational institutions includes tuition payments received from students (or their families) enrolled in public schools under that agency's jurisdiction, even if the tuition payments flow, in the first instance, to the government agency rather than to the institution in question. It also includes payments by other private entities to educational institutions, either as support for educational institutions or paid as rent for the use of resources by educational institutions. Direct private expenditure on educational institutions is net of subsidies received from public sources. Such subsidies are accounted as indirect public expenditure and included in public expenditure.

Indirect public expenditure on educational institutions includes subsidies to students, families or other private entities that are used by the recipients for payments to educational institutions.

Expenditure on personnel compensation (Table 18)

Current expenditure on compensation of personnel includes gross salaries (net of employee contributions for pensions, social security and other purposes) plus expenditure on non-salary compensation (benefits such as health care, health insurance, disability insurance, unemployment compensation, maternity and child-care benefits, free or subsidized housing) and retirement. Expenditure on retirement is estimated on the basis of expenditure for the retirement of current employees rather than current retirees.

Teaching staff includes only personnel directly involved in the instruction of students. Under expenditure on compensation of teachers, countries report the full compensation of full-time teachers plus appropriate portions of the compensation of staff who teach part time. Non-teaching staff include head teachers, school administrators, supervisors, counsellors, school psychologists, school health personnel, librarians, educational media specialists, curriculum developers, inspectors, educational administrators at the local, regional and national levels, clerical personnel, building operations and maintenance staff, security personnel, transportation workers, food service workers. The exact list of occupations included in this category varies from one country to another.

The proportions of current expenditure allocated to the compensation of teachers, compensation of other staff, total staff compensation and other (non-personnel) current outlays are calculated by expressing the respective amounts as percentages of total current expenditure.

Expenditure per student (Tables 9–10, 17)

The data used in calculating expenditure per student include only direct public and private expenditure on educational institutions. Public subsidies for students' living expenses have been excluded (with the exception of Table 17).

For some countries, expenditure data for students in private educational institutions were not available (indicated by notes in the tables). In some cases, where data collection still covers a very small number of independent private institutions, only expenditure on public and government-dependent private institutions is taken into account.

Expenditure per student at a particular level of education is calculated by dividing the total expenditure at that level by the corresponding full-time-equivalent enrolment. Only those types of educational institutions and programmes for which both enrolment and expenditure data are available are taken into account. The result in national currency is then converted into equivalent PPP dollars by dividing the national currency figure by the purchasing power parity (PPP) index.

Full-time, part-time and full-time-equivalent students (Tables 9–10, 17, 20, 23, 28)

Students are classified by their pattern of attendance, i.e. full-time or part-time. The part-time/full-time classification is regarded as an attribute of student participation rather than as an attribute of the educational programme or the provision of education in general.

Four elements are used to decide whether a student is enrolled full-time or part-time: the units of measurement for course load; a normal full-time course load, which is used as the criterion for establishing full-time participation; the student's actual course load; and the period of time over which the course load is measured. In general, students enrolled in primary and secondary level educational programmes are considered to participate full time if they attend school for at least 75 per cent of the school day or week (as locally defined) and would normally be expected to be in the programme for the entire academic year. Otherwise, they are considered part-time. When determining full-time/part-time status, the work-based component in combined school and work-based programmes is included. At the tertiary level, an individual is considered full-time if he or she is taking a course load or educational programme considered to require at least 75 per cent of a full-time commitment of time and resources. Additionally, it is expected that the student will remain in the programme for the entire year.

The *full-time equivalent* (FTE) measure attempts to standardize a student's actual load against the normal load. For the reduction of head-count data to FTEs, where data and norms on individual participation are available, course load is measured as the product of the fraction of the normal course load for a full-time student and the fraction of the school/academic year. [FTE = (actual course load/normal course load) *x* (actual duration of study during reference period/normal duration of study during reference period).] When actual course load information is not available, a full-time student is considered equal to one FTE.

Full-time, part-time and full-time-equivalent teachers (Tables 31, 33)

The classification of educational personnel as full-time and part-time is based on a concept of statutory working time (as opposed to actual or total working time or actual teaching time). Part-time employment refers to individuals who have been employed to perform less than the amount of statutory working hours required of a full-time employee. A teacher who is employed for at least 90 per cent of the normal or statutory number of hours of work of a full-time teacher over the period of a complete school year is classified as a full-time teacher for the reporting of head-count data. A teacher who is employed for less than 90 per cent of the normal or statutory number of hours of work of a full-time teacher over the period of a complete school year is classified as a part-time teacher. *Full-time equivalents* (FTEs) are generally calculated in person-years. The unit for the measurement of full-time equivalents is full-time employment, i.e. a full-time teacher equals one FTE. The full-time equivalence of part-time educational staff is then determined by calculating the ratio of hours worked over the statutory hours worked by a full-time employee during the school year.

Graduates (Tables 26, 29–30)

Graduates are those who were enrolled in the final year of a level of education and completed it successfully during the reference year. However, there are exceptions (especially at the university tertiary level of education) where graduation can also be recognized by the awarding of a certificate without the requirement that the participants are enrolled.

Completion is defined by each country. In some countries, completion occurs as a result of passing an examination or a series of examinations. In other countries, completion occurs after a requisite number of course hours have been accumulated (although completion of some or all of the course hours may also involve examinations).

Success is also defined by each country. In some countries, it is associated with the obtaining of a degree, certificate, or diploma after a final examination. In other countries, it is defined by the completion of programmes without a final examination.

Graduation rates (Tables 26, 29)

Gross graduation rates are estimated by dividing the number of all graduates by the population at the typical graduation age (multiplied by 100). In many countries, defining a typical age of graduation is difficult because ages of graduates vary. In that case, the average cohort size for a wider age band is used as denominator.

Gross Domestic Product (GDP) (Tables 1, 11–12, 14, 16, 19)

Gross domestic product (GDP) refers to the total output of goods and services for final use occurring within the domestic territory of a given country, regardless of the allocation to domestic and foreign claims. Gross domestic product is the sum of gross value added by all resident producers in the economy plus any taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. The residency of an institution is determined on the basis of economic interest in the territory for more than a year.

GDP per capita (Tables 1, 10, 35)

GDP per capita is the gross domestic product divided by mid-year population, expressed in purchasing power parity terms.

Human capital (Table 5)

The proxy for human capital stocks used in this report refers to the average number of years of schooling held by the working-age population at the beginning of each decade. It is derived from data on educational attainment of the adult population and age distribution of the population, measured at different points in time (see Box 1 in Chapter 1 for a detailed description of the methodology).

Whenever directly observable data on educational attainment of the population by age group exists (census or WEI data for recent years), it is used to process average years of education in the population. Whenever no direct data is available, the methodology extrapolates existing data on educational attainment backward and forward, and uses these extrapolations to estimate average years of schooling.

The average number of years of schooling is obviously a very imperfect proxy for human capital accumulation, since it does not say anything about the quality of education received, the type of skills developed (field of study) and their relevance to a country's labour market. It can be seen, however, as a proxy for the ability of a country's population to develop new skills and adopt new technology.

Intended instruction time for students (Table 32)

Intended instruction time for students refers to the number of hours per year pupils are instructed according to the compulsory and the flexible part of the intended curriculum. The total number of intended instruction hours per year was calculated by multiplying the total number of classroom sessions per year by the duration time of one session.

The *intended curriculum* is the subject-matter content as defined by the government or the education system. The intended curriculum is embodied in textbooks, curriculum guides and the content of examinations, and in policies, regulations and other official statements generated to direct the education system. The intended curriculum comprises the compulsory subjects (reading and writing in the mother tongue, mathematics, science, social studies, modern foreign languages, technology, arts, physical education, religion and vocational skills) as well as the flexible part of the curriculum.

Labour force (Tables 2, 6–7)

The labour force consists of all individuals in the population who are either employed or unemployed, these terms being defined according to the guidelines of the International Labour Office (ILO). The unemployed are defined as individuals who are without work, actively seeking employment and currently available to start work. The employed are defined as those who, during the survey reference week, worked for pay (employees) or profit (self-employed and unpaid family workers) for at least one hour; or have a job but are temporarily not at work (through injury, illness, holiday or vacation, strike or lock-out, educational or training leave, maternity or parental leave, etc.) and have a formal attachment to their job.

Net enrolment rate (Tables 20–22)

Net enrolment rates (also referred to as enrolment rates) are calculated by dividing the number of students of a particular age group enrolled in all levels of education by the number of persons in the population in that age group (multiplied by 100). Figures are based on head counts, i.e. they do not distinguish between full-time and part-time students.

Net enrolment rates for primary and secondary education are calculated for different age groups for different countries, dependent on the typical ages of participants at the accorded level. This can influence the results, e.g. in countries with longer programme duration the typical age for upper secondary education may include age 17 and 18, while in other countries only age 16 is included. As a result, countries with longer programmes may show lower rates due to the drop out of the 17- and 18-year-olds, although they have higher enrolment rates at all ages.

New entrant (Tables 24, 27)

New entrants to a level of education are students who are entering any programme leading to a recognized qualification at this level of education for the first time, irrespective of whether students enter the programme at the beginning or at an advanced stage of the programme. Individuals who are returning to study at a level following a period of absence from studying at that same level are not considered new entrants.

Private expenditure (private sources) (Tables 11, 13, 17)

Private expenditure refers to expenditure funded by private sources, e.g. households and other private entities. *Household* means students and their families. *Other private entities* include private business firms and non-profit organizations, including religious organizations, charitable organizations, and business and labour associations.

Private expenditure comprises school fees as well as fees for materials such as textbooks and teaching equipment, transportation to school (if organized by the school), meals (if provided by the school) and boarding; and expenditure by employers on initial vocational education (expenditure by private companies on the work-based element of school and work-based training of apprentices and students). Note that private educational institutions are considered service providers, not funding sources.

Public expenditure (public sources) (Tables 11, 13–16)

Public expenditure includes expenditure by all public agencies at local, regional and central levels of government. No distinction is made between education authorities and other government agencies. Thus, central government expenditure includes not only the expenditure of the national education ministry, but also all expenditure on education by other central government ministries and authorities. Similarly, educational expenditure by regional and local governments includes not only the expenditure of the regional or local agencies with primary responsibility for operation of schools (e.g. provincial ministries of education or local education authorities) but also the expenditure of other regional and local bodies that contribute to the financing of education.

Public and private educational institutions (Tables 15, 23, 28, 31, 33, 35)

Educational institutions are classified as either public or private according to whether a public agency or a private entity has the ultimate power to make decisions concerning the institution's affairs.

An institution is classified as *public* if it is: controlled and managed directly by a public education authority or agency; or controlled and managed either by a government agency directly or by a governing body (council, committee, etc.) most of whose members are either appointed by a public authority or elected by public franchise.

An institution is classified as *private* if it is controlled and managed by a non-governmental organization (e.g. a church, trade union or business enterprise), or if its governing board consists mostly of members not selected by a public agency.

In general, the question of who has the ultimate management control over an institution is decided with reference to the power to determine the general activity of the school and to appoint the officers managing the school. The extent to which an institution receives its funding from public or private sources does not determine the classification status of the institution.

A distinction is made between government-dependent and independent private institutions on the basis of the degree of a private institution's dependence on funding from government sources. A *government-dependent private institution* is one that receives more than 50 per cent of its core funding from government agencies. An *independent private institution* is one that receives less than 50 per cent of its core funding from government agencies. *Core funding* refers to the funds that support the basic educational services of the institution. It does not include funds provided specifically for research projects, payments for services purchased or contracted by private organizations, or fees and subsidies received for ancillary services such as lodging and meals. Additionally, institutions should be classified as government-dependent if their teaching staff are paid by a government agency, either directly or indirectly.

Purchasing power parity (PPP) (Tables 1, 9–10, 35)

Purchasing power parities (PPPs) are the currency exchange rates that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries. In other words, PPPs are the rates of currency conversion which eliminate the differences in price levels among countries. Thus, when expenditure on GDP for different countries is converted into a common currency by means of PPPs, it is, in effect, expressed at the same set of international prices so that comparisons between countries reflect only differences in the volume of goods and services purchased.

School expectancy (Table 20)

School expectancy measures the average duration of formal education that a 5-year-old child can expect to enrol in over her or his lifetime, assuming that the probability of being enrolled in school at any particular age is equal to the current enrolment rates for that age for all ISCED levels. It is calculated by adding the net enrolment rates for each single year of age from age five onwards and dividing by 100. Should there be a tendency to lengthen (or shorten) studies during the ensuing years, the actual average duration of schooling for the cohort will be higher (or lower).

Figures are based on head counts, i.e. they do not distinguish between full-time and part-time study. Countries who report comparably high proportions of part-time enrolment have, therefore, an overall higher school expectancy level.

It must also be noted that the expected number of years does not necessarily coincide with the expected number of grades of education completed because of grade repetition. Caution is required when data on school expectancy are compared. Neither the length of the school year nor the quality of education is necessarily the same in each country. In addition, as this indicator does not directly take into account the effects of repetition, it is not strictly comparable between countries with automatic promotion practices and those that permit grade repetition.

Student (Tables 2, 9–10, 17, 21, 23, 25, 28, 31–32)

A student is defined as any individual participating in educational services covered by the data collection. The number of students enrolled refers to the number of individuals (head count) who are enrolled within the reference period and not necessarily to the number of registrations. Each student enrolled is counted only once.

Student-teacher ratio (Table 31)

The student-to-teaching staff ratio is obtained by dividing the number of full-time-equivalent students at a given level of education by the number of full-time-equivalent teachers at that same level and for that same type of institution.

The concept of a ratio of students to teaching staff is different than the concept of class size. Although one country may have a lower ratio of students to teaching staff than another, this does not necessarily mean that classes are smaller in the first country or that students in the first country receive more teaching. The relationship between the ratio of students to teaching staff and both average class size and hours of instruction per student is complicated by many factors, including differences between countries in the length of the school year, the number of hours for which a student attends class each day, the length of a teacher's working day, the number of classes or students for which a teacher is responsible, the division of the teacher's time between teaching and other duties, the grouping of students within classes, and the practice of team teaching.

Teacher (Tables 18, 31, 33–35)

A teacher is defined as a person whose professional activity involves the transmission of knowledge, attitudes and skills that are stipulated in a formal curriculum to students enrolled in an educational programme. The teacher category includes only personnel who are directly involved in instructing students.

This definition does not depend on the qualification held by the teacher or on the delivery mechanism. It is based on three concepts: *activity*, thus excluding those without active teaching duties with the exception of teachers temporarily not at work (e.g. for reasons of illness or injury, maternity or parental leave, holiday or vacation); *profession*, thus excluding people who work occasionally or in a voluntary capacity in educational institutions or as teacher's aid (see ***educational personnel***); and *educational programme*, thus excluding people who provide services other than formal instruction

to students (e.g. supervisors, activity organizers, etc.), whether the programme is established at the national or school level.

Head teachers without teaching responsibilities are not defined as teachers, but classified separately (see ***educational personnel***). Head teachers who do have teaching responsibilities are defined as (part-time) teachers, even if they only teach for 10 per cent of their time. Former teachers, people who work occasionally or in a voluntary capacity in schools, people who provide services other than formal instruction, e.g. supervisors or activity organizers, are excluded.

Teachers' salaries, statutory (Table 35)

Teachers' salaries are expressed as statutory salaries, which are scheduled salaries according to official pay scales. They refer to the average scheduled gross salary per year for a full-time teacher with the minimum training necessary to be fully qualified at the beginning of his or her teaching career. Reported salaries are defined as the sum of wages (total sum of money paid by the employer for the labour supplied) minus the employer's contribution to social security and pension funding (according to existing salary scales). Bonuses that constitute a regular part of the salary (such as a 13th month, holidays or regional bonuses) are included in the figures.

Additional bonuses (for example, remuneration for teachers in remote areas, for participating in school improvement projects or special activities, or for exceptional performance) are excluded from the reported gross salaries. Salaries at 15 years' experience refer to the scheduled annual salary of a full-time classroom teacher with the minimum training necessary to be fully qualified and with 15 years' experience. The maximum salaries reported refer to the scheduled maximum annual salary (top of the salary scale) of a full-time classroom teacher with the minimum training to be fully qualified for his or her job. Salary data are reported in accordance with formal policies for public institutions.

Teaching time, statutory (Table 33)

Statutory teaching time (sometime also referred to as instructional time) is defined as the total number of hours per year for which a full-time classroom teacher is responsible for teaching a group or class of students, according to the formal policy in the specific country. Periods of time formally allowed for breaks between lessons or groups of lessons are excluded.

Teaching hours per year are calculated on the basis of teaching hours per day multiplied by the number of teaching days per year, or on the basis of teaching hours per week multiplied by the number of weeks per year that the school is open for teaching. The number of hours per year that fall on days when the school is closed for festivities and celebrations are excluded. When no formal data were available, the number of teaching hours was estimated from survey data.

Total public expenditure (Tables 1, 14)

Total public expenditure, as used for the calculation of the education indicators, corresponds to the non-repayable current and capital expenditure of all levels of government.

Current expenditure includes final consumption expenditure (e.g. compensation of employees, consumption of intermediate goods and services, fixed capital and military expenditure), property

income paid, subsidies, and other current transfers paid (e.g. social security, social assistance, pensions and other welfare benefits).

Capital expenditure is spending to acquire and/or improve fixed capital assets, land, intangible assets, government stocks and non-military non-financial assets, and spending to finance net capital transfers.

Typical ages (Tables 21–22, 24, 26–27, 29)

Typical ages refer to the ages that normally correspond to the age at entry and ending of a cycle of education. These ages relate to the theoretical duration of a cycle, assuming full-time attendance and no repetition of a year. The assumption is made that, at least in the ordinary education system, a student can proceed through the educational programme in a standard number of years, which is referred to as the theoretical duration of the programme. The *typical starting age* is the age at the beginning of the first school/academic year of the relevant level and programme. The *typical ending age* is the age at the beginning of the last school/academic year of the relevant level and programme. The *typical graduation age* is the age at the end of the last school/academic year of the relevant level and programme when the qualification is obtained.

Vocational and technical education (Tables 25, 26, 33, 34)

The WEI/UOE programme uses three categories to describe the orientation of educational programmes:

- *General programmes* refer to education that is not designed explicitly to prepare participants for a specific class of occupations or trades, or for entry into further vocational/technical education programmes. Less than 25 per cent of the programme content is vocational or technical.
- *Pre-vocational programmes* refer to education mainly designed as an introduction to the world of work and as preparation for further vocational or technical education. It does not lead to a labour-market relevant qualification. Content is at least 25 per cent vocational or technical.
- *Vocational programmes* refer to education which prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programmes leads to a labour market-relevant vocational qualification.

ANNEX A3 – CROSS-REFERENCE BETWEEN DATA TABLES AND TECHNICAL NOTES

	See notes on:
Table 1	Gross Domestic Product (GDP); GDP per capita; purchasing power parity (PPP); total public expenditure.
Table 2	Student; labour force.
Table 3	Educational attainment.
Table 4	Educational attainment.
Table 5	Human capital; educational attainment.
Table 6	Labour force; educational attainment.
Table 7	Labour force; educational attainment.
Table 8	Earnings; educational attainment.
Table 9	Expenditure per student; student; purchasing power parity (PPP); expenditure on educational institutions; educational institution; full-time, part-time and full-time-equivalent students.
Table 10	Expenditure per student; student; purchasing power parity (PPP); expenditure on educational institutions; educational institution; full-time, part-time and full-time-equivalent students; GDP per capita.
Table 11	Expenditure on educational institutions; educational institution; public expenditure (public sources); private expenditure (private sources of funds); Gross Domestic Product (GDP).
Table 12	Expenditure on educational institutions; educational institution; Gross Domestic Product (GDP).
Table 13	Expenditure on educational institutions; educational institution; public expenditure (public sources); private expenditure (private sources of funds).
Table 14	Expenditure on educational institutions; educational institution; public expenditure (public sources); total public expenditure; Gross Domestic Product (GDP).
Table 15	Expenditure on educational institutions; educational institution; public expenditure (public sources); public and private educational institutions.
Table 16	Expenditure on educational institutions; educational institution; public expenditure (public sources); Gross Domestic Product (GDP).

Table 17 Expenditure per student; student; expenditure on educational institutions; educational institution; private expenditure (private sources of funds); full-time, part-time and full-time-equivalent students.

Table 18 Expenditure on educational institutions; educational institution; current and capital expenditure; expenditure on personnel compensation; educational personnel; teacher.

Table 19 Gross domestic product (GDP); public expenditure; total public expenditure.

Table 20 School expectancy; net enrolment rate; full-time, part-time and full-time-equivalent students.

Table 21 Net enrolment rate; student; typical ages.

Table 22 Net enrolment rate; typical ages.

Table 23 Student; educational institution; public and private educational institutions; full-time, part-time and full-time-equivalent students.

Table 24 Entry rate; new entrant; typical ages.

Tables 25 Student; vocational and technical education.

Table 26 Graduates; graduation rates; typical ages; vocational and technical education.

Table 27 Entry rate; new entrant; typical ages.

Table 28 Student; educational institution; public and private educational institutions; full-time, part-time and full-time-equivalent students.

Table 29 Graduates; graduation rates; typical ages.

Table 30 Graduates.

Table 31 Student-teacher ratio; class size; student; full-time, part-time and full-time equivalent students; educational personnel; teacher; full-time, part-time and full-time equivalent teachers; educational institution; public and private educational institutions.

Table 32 Intended instruction time for students; student.

Table 33 Teaching time, statutory; teacher; full-time, part-time and full-time-equivalent teachers; educational personnel; educational institution; public and private educational institutions; vocational and technical education.

Table 34 Teacher; educational personnel; educational institution; vocational and technical education.

Table 35 Teacher salaries, statutory; purchasing power parity (PPP); teacher; educational personnel; educational institution; public and private educational institutions; teaching time, statutory; GDP per capita.

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ANNEX A4 – DATA TABLES

SYMBOLS FOR MISSING DATA

Four symbols are employed in the tables and graphs to denote missing data:

a	Data not applicable because the category does not apply.
m	Data not available.
n	Magnitude is either negligible or zero.
x (y)	Data included in another category/column (y) of the table.

Table 1

Basic reference statistics (1999)

Gross domestic product (GDP), public expenditure, currency exchange rates and population

	GDP per capita (in equivalent US$ converted using PPPs)	GDP (in millions equivalent US$ converted using PPPs)	GDP growth rate (%)	Total public expenditure as percentage of GDP	Official market exchange rate (local currency unit to US$, 1999 average)	Purchasing power parity exchange rate (local currency unit to international PPP dollar)	Total population (000s)
	1	2	3	4	5	6	7
WEI participants							
Argentina	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	36 58
Brazil	7 037	1 181 980	[illegible]	m	1 815	0 810	168 260
Chile	8 667	129 933	[illegible]	[illegible]	508 777	264 190	15 018
China	3 617	4 534 864	[illegible]	19.1	8 278	1 810	1 259 090
Egypt	4 10	214 303	[illegible]	m	3 395	1 410	62 655
India	2 248	2 242 031	[illegible]	m	43 055	8 650	997 515
Indonesia	2 857	591 544	[illegible]	17 8	7 855 150	1 892 410	210 439
Jamaica	3 561	9 251	[illegible]	57 9	39 044	29 890	2 591
Jordan	3 955	18 745	[illegible]	24 2	0 709	0,310	4 896
Malaysia	8 209	186 419	[illegible]	22 6	3 800	1 610	22 712
Paraguay	4 384	23 493	[illegible]	54 8	3 119 073	1 027 720	5 35
Peru	4 622	116 623	[illegible]	15 7	3 383	1 510	25 525
Philippines	3 805	282 559	[illegible]	m	39 089	10,590	72 602
Russian Federation	7 473	1 092 615	[illegible]	m	24 620	4,160	145 01
Thailand	6 132	369 446	[illegible]	17 5	37 814	12 730	61
Tunisia	5 957	56 338	[illegible]	m	1 186	0 440	9 44
Uruguay	8 879	29 415	[illegible]	21 2	11 339	8 120	3 31
Zimbabwe	2 876	34 230	[illegible]	m	38 301	6 280	12 54
WEI mean	***5 553***	~	[illegible]	***27.9***	~	~	~
OECD countries							
Australia	24 574	466 102	4,4	34.4	1 550	1 340	18 967
Austria	25 089	203 017	2 1	51 1	12 916	13 240	8 092
Belgium	25 443	260 184	2,5	50 1	37 864	36,150	10 226
Canada	26 251	800 424	4.6	m	1,486	1,180	30 491
Czech Republic	13 018	133 801	0,2	45 2	34.569	13 720	10 278
Denmark	25 869	137 780	1 7	54 6	6 976	8 820	5 326
Finland	23 096	119 312	4.0	49,5	5 581	6 060	5 166
France[1]	22 897	1 342 224	2 9	52 2	6 157	6 570	58 620
Germany	23 742	1 949 215	1 5	47,8	1 836	1,990	82 100
Greece	15 414	162 434	3.4	52,1	305 647	235 370	10 538
Hungary	11 430	115 078	4.5	36.3	237 146	99 810	10 068
Iceland	27 835	7 724	4.3	40.9	72 335	82 550	278
Ireland	25 918	97 243	9 8	32,6	0 739	0 710	3 752
Italy	22 172	1 278 128	1.4	48.4	1 817 440	1 665,070	57 646
Japan	24 898	3 151 311	0,2	38 2	113 907	157 120	126 570
Korea	15 712	736 252	10 7	23 8	1 188 817	657 080	46 858
Luxembourg	42 769	18 476	7 5	42.6	37 864	39 610	432
Mexico	8 297	801 326	3.5	19.6	9,560	5 770	96 586
Netherlands	24 215	382 712	3 6	45 8	2,068	2 130	15 805
New Zealand	19 104	72 799	4.4	m	1,890	1 420	3 811
Norway	28 433	126 812	0 9	47.4	7 799	9 410	4 460
Poland	8 450	326 626	4 1	44.0	3 967	1 880	38 654
Portugal	16 064	160 462	3 0	43 7	188 178	133 360	9 989
Slovak Republic	10 591	57 149	1,9	31 3	41 363	14 270	5 396
Spain	18 079	712 481	3.7	39.7	156 174	130 630	39 410
Sweden	22 636	200 497	3 8	57,1	8 262	9 840	8 857
Switzerland	27 171	193 892	1 5	36 1	1 502	2 000	7 136
Turkey	6 380	410 786	5 1	m	418 782 906	188 357 984	64 385
United Kingdom	22 093	1 314 560	2,1	38,7	0 618	0 680	59 501
United States	31 872	8 867 673	3 6	m	1 000	1 030	278 230
OECD mean	***21 317***	~	***3.2***	***42.4***	~	~	~

1. Excluding DOM (Départements d'Outre-Mer)

Sources: World Bank, OECD/UNESCO WEI

Table 2

Relative size and expected changes in school-age populations (2000)

Size of school-age populations as a percentage of total population and of the labour force, and school age population projections

	Percentage of the population			Ratio of students to the labour force	Index change in school-age population (base year 2000 = 100)					
					Ages 5–14		Ages 15–19		Ages 20–29	
	Ages 5–14	Ages 15–19	Ages 20–29		1990	2015*	1990	2015*	1990	2015*
	1	2	3	4	5	6	7	8	9	10
WEI participants										
[illegible]	[illegible]		[illegible]	[illegible]	98	[illegible]	85	[illegible]	[illegible]	[illegible]
Brazil	[illegible]	11	18	[illegible]	104	98	86	[illegible]	[illegible]	[illegible]
Chile	[illegible]	8	16	86	87	97	96	[illegible]	[illegible]	[illegible]
China	18	7	16	m	91	82	122	[illegible]	[illegible]	[illegible]
Egypt	[illegible]	12	17	m	88	96	71	[illegible]	[illegible]	[illegible]
India	[illegible]	9	17	m	88	101	85	[illegible]	[illegible]	[illegible]
Indonesia	[illegible]	11	19	56	99	94	91	98	[illegible]	[illegible]
Jamaica	[illegible]	10	18	m	101	92	93	93	[illegible]	[illegible]
Jordan	[illegible]	12	20	m	78	143	72	139	[illegible]	[illegible]
Malaysia	[illegible]	10	18	91	86	102	79	116	[illegible]	[illegible]
Paraguay	[illegible]	11	16	101	78	122	71	127	[illegible]	[illegible]
Peru[1]	[illegible]	10	18	104	95	100	87	105	81	[illegible]
Philippines	[illegible]	11	18	93	85	105	82	118	80	[illegible]
Russian Federation	[illegible]	8	15	46	114	62	86	53	101	[illegible]
Thailand	16	9	19	73	108	99	102	99	94	92
Tunisia	22	11	18	122	102	92	83	79	83	108
Uruguay	16	8	16	70	99	102	102	109	87	102
Zimbabwe	25	12	20	m	78	116	74	129	79	156
WEI mean	***21***	***10***	***17***	***91***	***93***	***100***	***87***	***105***	***86***	***118***
OECD countries										
Australia	14	7	15	m	92	99	102	102	97	106
Austria	12	6	13	m	96	68	108	86	131	93
Belgium	12	6	13	m	99	79	108	92	118	96
Canada	13	7	14	m	93	89	94	96	113	109
Czech Republic	12	7	17	m	126	71	121	66	80	73
Denmark	12	5	14	m	91	88	134	122	113	93
Finland	12	6	12	m	101	76	91	88	115	103
France	13	7	14	m	103	97	108	94	107	93
Germany	11	6	12	m	94	75	97	89	140	101
Greece	10	7	15	m	128	84	110	74	95	71
Hungary	12	7	16	m	124	70	123	76	81	74
Iceland	16	8	15	m	95	86	100	99	102	105
Ireland	15	9	16	m	122	114	98	80	79	89
Italy	10	5	14	m	112	84	141	87	114	70
Japan	10	6	15	m	129	92	133	82	91	69
Korea	14	8	17	m	118	89	117	81	103	79
Luxembourg	12	5	13	m	80	109	88	124	107	130
Mexico	23	11	19	m	98	97	100	105	77	103
Netherlands	12	6	13	m	91	85	118	106	124	99
New Zealand	15	7	14	m	87	91	107	109	108	113
Norway	13	6	14	m	88	85	120	113	111	103
Poland	14	9	15	m	123	68	85	59	86	89
Portugal	11	7	16	m	129	96	128	86	92	69
Slovak Republic	m	m	m	m	120	71	96	65	85	85
Spain	10	7	16	m	138	84	131	71	98	62
Sweden	13	6	13	m	84	61	112	89	111	108
Switzerland	12	6	12	m	91	70	107	94	139	102
Turkey	20	10	19	m	106	99	91	103	77	99
United Kingdom	13	6	13	m	93	80	104	98	119	105
United States	14	7	13	m	87	96	89	109	111	120
OECD mean	***13***	***7***	***15***	***~***	***105***	***85***	***109***	***91***	***104***	***94***

1 Students in advanced research programmes are excluded from the comparison with the labour force

* These figures are projections.

Sources: OECD/UNESCO WEI and UN Population Division

Table 3

Educational attainment of the adult population (1999)

Distribution of the population aged 25–64, by highest level of education attained

	No schooling	Distribution of the population aged 25–64 by highest level of education attained	Completed primary	Lower secondary	Upper secondary	Tertiary, Type B programmes	Tertiary, Type A and advanced research programmes	All levels of education
	1	2	3	4	5	6	7	8
Argentina	4.1	0.1	13.7	34.1	28.1	7.1	9.1	100.0
Brazil	14.1	15.8	10.6	15.1	13.[illegible]	x(7)	7.7	100.0
Chile	3.1	1.6	17.7	25.0	31.9	10.5	8.6	100.0
Indonesia[1]	11.1	1.7	50.1	11.9	16.7	2.1	2.3	100.0
Jamaica[2]	1.[illegible]	0	50.2	x(5)	41.1	1.0	2.8	100.0
Malaysia[3]	10.5	x(3)	31.7	31.0	19.1	x(7)	8.6	100.0
Paraguay	5.1	14.0	40.9	11.4	16.2	x(7)	3.0	100.0
Peru[3]	7.1	7.6	18.6	5.5	40.8	7.1	8.5	100.0
Thailand	0.1	5.3	66.5	0.4	1.[illegible]	0.1	7.9	100.0
Tunisia	36.4	13.7	8.1	17.0	2.8	2.0	3.9	100.0
Uruguay	0.9	10.1	44.2	1.[illegible]	17.0	0.3	x(6)	100.0
WEI mean	***8.1***	***11.8***	***33.7***	***14.8***	***21.7***	***3.7***	***6.2***	***100.0***

1. Year of reference 2000
2. Total of columns 1–7 is less than 100% due to unallocated category by ISCED level. Post-secondary non tertiary is included in tertiary, Type B
3. Post secondary non tertiary is missing

Source: OECD/UNESCO WEI.

Table 4

Educational attainment of the adult population, by age group and gender (1999)

Percentage of the population that has attained a specific level of education, by age and gender

		At least upper secondary						At least tertiary				
		Ages 25–64	Ages 20–24	Ages 25–34	Ages 35–44	Ages 45–54	Ages 55–64	Ages 25–64	Ages 25–34	Ages 35–44	Ages 45–54	Ages 55–64
		1	2	3	4	5	6	7	8	9	10	11
Argentina	Men	40	51	48	41	37	30	12	11	13	13	10
	Women	43	64	55	45	40	26	15	19	17	14	7
Brazil	Men	24	27	27	26	21	14	7	8	8	9	6
	Women	26	35	33	29	22	11	8	9	9	8	5
Chile	Men	45	60	55	46	39	28	11	13	11	11	7
	Women	44	66	57	47	37	23	8	10	8	8	4
Indonesia[1]	Men	26	42	37	27	20	11	5	6	6	5	2
	Women	17	36	29	17	10	4	4	6	4	2	1
Jamaica	Men	m	m	m	m	m	m	4	3	5	4	3
	Women	m	m	m	m	m	m	4	4	5	3	2
Malaysia	Men	39	58	50	41	28	15	10	12	10	8	5
	Women	35	66	53	35	17	6	7	11	7	4	2
Paraguay	Men	19	31	27	19	14	9	3	3	3	4	3
	Women	19	34	26	18	14	8	3	3	3	2	1
Peru	Men	53	69	61	56	46	34	17	16	18	19	14
	Women	41	64	54	43	29	17	15	20	15	10	7
Thailand	Men	18	37	26	19	12	8	10	12	12	8	5
	Women	15	35	23	16	8	4	10	14	12	6	3
Tunisia	Men	12	14	14	11	13	6	9	10	8	8	4
	Women	7	14	10	6	4	1	4	7	4	2	1
Uruguay	Men	30	28	34	35	28	21	7	6	10	7	6
	Women	34	40	42	37	31	21	11	11	12	11	9
WEI mean	***Men***	***31***	***42***	***38***	***32***	***26***	***17***	***9***	***9***	***10***	***9***	***6***
	Women	***28***	***45***	***38***	***29***	***21***	***12***	***8***	***10***	***9***	***6***	***4***

1. Year of reference 2000.

Source: OECD/UNESCO WEI.

Table 5

Trends in human capital availability in the working-age population

Average years of schooling in the population aged 15–64, 1960–2000

	Average years of schooling in the population aged 15–64				
	1960	1970	1980	1990	2000
	1	2	3	4	5
Argentina	5 11	6 01	7 62	8 31	8 31
Brazil	3 07	3 [illegible]	5 27	6 48	7.50
Chile	6 19	7 05	8 18	9 14	9 94
China	2 26	3 10	4 10	5 00	5 96
Egypt	1 01	1 64	2 92	4 96	6.76
India	1 17	1 95	2 61	3 35	4 34
Indonesia	1 60	2 89	3 80	5 98	7 25
Jamaica	4 82	5 77	7 24	8 09	8 66
Jordan	2 58	5 22	7 40	9 36	10 28
Malaysia	3 22	4 60	6 22	7.98	9 31
Paraguay	4 03	4 55	5 21	5.96	6 59
Peru	4 27	5 23	6 39	7 47	8 32
Philippines	4 45	5 28	6 26	7 17	7 94
Thailand	2 60	3 15	3 87	6 50	7.51
Tunisia	0 83	1 58	2 73	3 32	4.44
Uruguay	5 32	6 04	6 85	7.67	8 36
Zimbabwe	3 56	4 28	5.27	7.09	8.29
WEI mean	***3.36***	***4.28***	***5.34***	***6.71***	***7.63***

Source: Cohen and Soto, 2001.

Table 6
Labour force participation rates (1999)

Percentage of the total population that is either in work or searching for work, by level of educational attainment, age group and gender

		No schooling	Uncompleted primary	Completed primary	Lower secondary	Upper secondary	Tertiary, Type B programmes	Tertiary, Type A and advanced research programmes	All levels of education
		1	2	3	4	5	6	7	8
Ages 25–64									
Argentina	Men	67.4	86.4	90.8	93.9	92.0	x(7)	97.0	91.6
	Women	32.2	42.9	45.1	50.6	59.9	x(7)	87.0	55.7
Brazil	Men	85.4	89.8	90.6	92.3	92.9	x(7)	93.3	90.7
	Women	49.6	55.4	57.1	61.9	71.7	x(7)	83.0	61.3
Chile	Men	70.5	88.0	90.1	94.4	94.3	93.5	94.1	92.3
	Women	16.2	25.9	32.2	37.2	54.2	66.7	79.6	44.0
Indonesia[1]	Men	80.3	90.4	94.7	94.3	93.9	93.9	95.9	92.8
	Women	50.5	59.8	56.7	45.6	49.7	77.1	78.1	54.9
Malaysia[1]	Men	87.9	x(1)	92.0	95.9	96.2	x(7)	94.7	94.2
	Women	37.9	x(1)	38.8	40.3	57.4	x(7)	81.0	47.1
Paraguay	Men	86.8	94.8	95.0	96.6	95.1	x(7)	97.4	94.9
	Women	45.0	47.3	55.5	65.6	74.5	x(7)	91.6	57.0
Peru[1]	Men	92.1	95.9	95.2	95.4	93.5	93.8	95.1	94.5
	Women	74.7	75.0	70.9	63.4	63.6	76.1	81.5	71.1
Thailand	Men	79.7	88.5	94.8	94.4	94.3	94.7	95.1	94.1
	Women	64.9	73.2	76.3	73.0	78.2	84.9	91.0	76.7
Tunisia	Men	81.4	93.4	94.0	94.5	84.7	76.0	91.8	90.4
	Women	16.1	21.0	26.1	46.4	69.5	66.9	85.1	25.8
Uruguay	Men	65.8	81.1	91.0	94.9	94.9	95.3	x(6)	91.5
	Women	27.3	40.5	58.0	70.1	76.4	87.0	x(6)	65.5
WEI mean	***Men***	***79.7***	***89.8***	***92.8***	***94.6***	***93.2***	***91.2***	***94.9***	***92.7***
	Women	***41.4***	***49.0***	***51.7***	***55.4***	***65.5***	***76.4***	***84.2***	***55.9***
Ages 25–34									
Argentina	Men	55.1	88.5	93.9	95.8	90.0	x(7)	98.4	93.5
	Women	25.9	40.6	46.7	49.5	63.8	x(7)	90.3	60.9
Brazil	Men	86.7	95.5	95.7	96.1	96.2	x(7)	97.4	95.3
	Women	49.5	59.6	60.6	63.5	77.1	x(7)	90.3	66.9
Chile	Men	52.1	90.9	96.2	97.1	94.9	92.9	88.0	94.2
	Women	14.1	28.6	30.6	35.8	56.4	70.8	78.6	48.7
Indonesia[1]	Men	92.0	97.0	97.8	97.3	95.7	96.9	97.9	96.9
	Women	60.4	58.0	53.4	46.3	49.6	78.5	78.3	53.4
Malaysia[1]	Men	91.5	x(1)	97.5	98.5	98.7	x(7)	96.5	98.0
	Women	43.3	x(1)	43.1	40.5	57.8	x(7)	86.6	53.4
Paraguay	Men	82.9	96.5	95.5	98.1	96.6	x(7)	100.0	96.3
	Women	24.1	45.2	55.1	61.6	76.8	x(7)	94.9	58.9
Peru[1]	Men	77.2	97.9	93.4	95.9	93.1	96.7	92.8	94.3
	Women	82.6	76.4	75.1	63.9	66.3	79.7	88.9	73.5
Thailand	Men	71.4	94.9	96.5	96.4	95.0	93.3	94.4	95.6
	Women	69.7	80.8	79.5	75.4	80.9	88.4	91.3	80.4
Tunisia	Men	89.4	97.2	97.4	96.6	78.8	60.2	87.0	93.4
	Women	20.0	26.9	32.5	49.7	65.7	59.2	84.1	34.2
Uruguay	Men	49.7	78.9	96.8	98.2	96.6	99.6	x(6)	96.3
	Women	n	33.8	64.3	74.7	82.0	96.4	x(6)	74.3
WEI mean	***Men***	***74.8***	***93.0***	***96.3***	***97.0***	***93.6***	***89.9***	***94.7***	***95.4***
	Women	***39.0***	***50.0***	***54.1***	***56.1***	***67.6***	***78.8***	***87.0***	***60.5***
Ages 55–64									
Argentina	Men	63.6	71.8	73.8	79.7	79.7	x(7)	85.0	76.3
	Women	29.6	35.7	31.7	32.2	40.2	x(7)	70.4	36.5
Brazil	Men	79.1	76.9	69.2	63.9	60.1	x(7)	69.0	72.5
	Women	39.7	38.1	35.4	36.8	37.0	x(7)	49.5	38.1
Chile	Men	69.8	77.7	75.9	74.6	76.5	81.9	90.2	76.9
	Women	10.1	20.0	25.2	26.3	34.4	68.1	57.3	26.1
Indonesia[1]	Men	71.6	76.9	77.6	66.4	61.1	56.9	60.0	73.4
	Women	40.7	45.4	45.8	34.9	30.5	35.3	57.3	42.5
Malaysia[1]	Men	76.5	x(1)	71.9	59.1	48.1	x(7)	49.6	67.7
	Women	28.9	x(1)	21.8	13.2	17.3	x(7)	19.0	24.5
Paraguay	Men	88.9	89.3	82.4	94.4	80.6	x(7)	91.6	87.6
	Women	45.0	43.1	44.6	56.9	47.1	x(7)	58.7	45.0
Peru[1]	Men	96.2	91.5	90.5	86.3	82.1	67.4	84.5	87.8
	Women	66.4	64.3	45.6	23.7	42.1	29.2	34.4	55.8
Thailand	Men	70.3	77.8	81.4	67.2	70.3	66.5	74.1	78.7
	Women	45.0	58.5	53.5	41.2	45.8	29.0	72.6	52.4
Tunisia	Men	64.9	61.8	50.0	47.2	42.0	53.7	70.2	61.6
	Women	10.2	7.5	7.4	12.9	32.3	31.6	43.0	10.3
Uruguay	Men	69.2	69.3	71.0	74.4	75.9	78.0	x(6)	72.1
	Women	20.6	31.7	36.0	41.0	44.1	48.2	x(6)	37.4
WEI mean	***Men***	***75.0***	***77.0***	***74.4***	***71.3***	***67.6***	***67.4***	***74.9***	***75.4***
	Women	***33.6***	***38.3***	***34.7***	***31.9***	***37.1***	***40.2***	***51.4***	***36.9***

1. Year of reference 2000.
2. Post-secondary non-tertiary is missing.

Source: OECD/UNESCO WEI.

Table 7
Unemployment rates (1999)

Percentage of the labour force that is without work, available for work and actively seeking work, by level of educational attainment, age group and gender (1999)

		No schooling	Uncompleted primary	Completed primary	Lower secondary	Upper secondary	Tertiary, Type B programmes	Tertiary, Type A and advanced research programmes	All levels of education
		1	2	3	4	5	6	7	8
Ages 25–64									
Argentina	Men	18.3	15.3	11.4	9.0	7.1	x(7)	3.0	9.1
	Women	10.0	13.3	12.0	13.7	11.6	x(7)	4.4	10.4
Brazil	Men	3.4	4	6.1	1.9	1.6	x(7)	3.0	5.4
	Women	6.0	7	9.3	12.2	9.7	x(7)	4.5	8.6
Chile	Men	7.9	8.4	7.9	10.0	7.7	14.7	5.8	8.3
	Women	5.4	9.7	7.0	11.0	9.8	21.9	6.2	9.4
Indonesia[1]	Men	0.3	0.9	1.0	3.4	4.5	3.8	7.7	2.3
	Women	0.3	0.6	1.4	5.0	8.3	5.1	16.7	2.8
Malaysia[2]	Men	1.3	x(1)	1.6	2.0	1.6	x(7)	1.3	1.7
	Women	0.7	x(1)	0.9	1.1	1.2	x(7)	1.4	1.1
Peru[2]	Men	1.1	2.1	3.2	4.5	6.0	4.9	4.4	4.3
	Women	0.6	2.9	3.5	10.5	6.1	8.9	3.0	4.4
Thailand	Men	0.7	2.2	1.5	2.6	3.0	3.0	1.8	1.8
	Women	1.4	1.8	2.1	2.6	2.1	2.8	1.4	2.0
Uruguay	Men	6.8	6.4	5.9	5.6	4.4	1.0	x(6)	5.2
	Women	3.9	12.4	14.8	11.3	10.3	1.4	x(6)	10.8
WEI mean	***Men***	***5.0***	***5.8***	***4.8***	***5.5***	***5.0***	***5.5***	***3.9***	***4.8***
	Women	***3.5***	***6.9***	***6.4***	***8.4***	***7.4***	***8.0***	***5.4***	***6.2***
Ages 25–34									
Argentina	Men	15.9	13.9	13.1	10.8	8.1	x(7)	3.5	9.8
	Women	7.1	20.9	20.2	18.6	12.0	x(7)	6.4	13.4
Brazil	Men	4.9	6.8	7.0	7.9	7.4	x(7)	3.4	6.9
	Women	12.0	11.8	13.5	15.3	12.1	x(7)	6.0	12.3
Chile	Men	10.2	11.9	9.5	11.9	10.2	15.9	8.2	10.6
	Women	4.2	14.6	9.9	14.1	11.6	17.3	10.3	12.0
Indonesia[1]	Men	1.5	1.6	1.7	5.8	7.7	8.0	15.7	5.0
	Women	0.9	0.7	2.5	7.5	12.1	9.6	24.7	6.4
Malaysia[2]	Men	2.3	x(1)	1.6	2.5	1.6	x(7)	2.0	1.9
	Women	0.8	x(1)	1.3	1.8	1.6	x(7)	1.8	1.6
Peru[2]	Men	n	1.6	2.3	4.3	7.0	4.5	5.6	4.9
	Women	n	3.9	6.2	7.2	6.9	9.9	2.7	5.8
Thailand	Men	n	4.1	2.5	3.1	4.0	3.1	3.1	2.8
	Women	0.9	4.4	2.7	3.5	2.1	3.8	2.8	2.7
Uruguay	Men	47.2	8.3	7.1	8.1	6.3	1.6	x(6)	6.9
	Women	n	30.5	19.6	13.9	12.2	1.5	x(6)	13.5
WEI mean	***Men***	***10.3***	***6.9***	***5.6***	***6.8***	***6.5***	***6.6***	***5.9***	***6.1***
	Women	***3.2***	***12.4***	***9.5***	***10.2***	***8.8***	***8.4***	***7.8***	***8.5***
Ages 55–64									
Argentina	Men	15.4	18.9	14.2	14.0	5.7	x(7)	4.2	12.1
	Women	1.5	10.6	12.3	0.6	12.4	x(7)	1.6	9.3
Brazil	Men	2.4	3.5	5.5	5.8	8.2	x(7)	4.6	4.3
	Women	2.4	2.4	3.0	4.8	3.0	x(7)	4.7	2.9
Chile	Men	6.2	7.2	8.0	11.4	7.6	21.8	7.4	8.3
	Women	5.1	7.7	4.3	8.3	5.7	15.7	2.1	5.9
Indonesia[1]	Men	0.3	0.1	0.4	0.9	0.8	1.5	n	0.3
	Women	0.1	0.1	0.8	0.3	n	2.0	n	0.2
Malaysia[2]	Men	1.3	x(1)	2.2	1.7	2.4	x(7)	0.8	1.9
	Women	0.6	x(1)	0.4	n	2.3	x(7)	n	0.6
Peru[2]	Men	n	3.3	5.6	4.3	4.1	12.6	4.3	4.3
	Women	0.4	0.6	0.5	32.6	7.3	n	n	1.4
Thailand	Men	0.3	1.5	0.4	3.2	0.2	9.7	n	0.6
	Women	0.4	n	1.5	0.3	n	n	n	1.1
Uruguay	Men	2.9	7.7	6.6	5.2	3.4	0.9	x(6)	5.7
	Women	n	8.2	10.1	6.0	9.3	0.7	x(6)	8.0
WEI mean	***Men***	***3.6***	***6.0***	***5.4***	***5.9***	***4.0***	***9.3***	***4.2***	***4.7***
	Women	***1.3***	***4.2***	***4.1***	***6.6***	***5.0***	***3.7***	***2.8***	***3.7***

1. Year of reference 2000
2. Post secondary non tertiary is missing

Source: OECD/UNESCO WEI

Table 8

Earning differentials by educational attainment (1999)

Index of the multiplier effect of education on average earnings in the population aged 25–64, by level of education and gender (completion of upper secondary = 1.00)

	Men					Women				
	No schooling	Completed primary (ISCED 1)	Completed lower secondary (ISCED 2)	Completed upper secondary (ISCED 3)	Completed tertiary, Type A or advanced research programmes (ISCED 5A/6)	No schooling	Completed primary (ISCED 1)	Completed lower secondary (ISCED 2)	Completed upper secondary (ISCED 3)	Completed tertiary, Type A or advanced research programmes (ISCED 5A/6)
	1	2	3	4	5	6	7	8	9	10
Argentina	0.35	0.51	0.71	1.00	2.34	0.44	0.57	0.69	1.00	2.18
Brazil	0.30	0.45	0 62	1 00	2 58	0.31	0.48	0.61	1.00	2.79
Chile	0 43	0 49	0 55	1.00	3 17	0.37	0.45	0 54	1.00	2.69
Indonesia[1]	0 50	0 58	0 70	1 00	1 82	0.37	0 40	0.57	1 00	1.55
Paraguay	0.07	0.36	0.25	1 00	3,92	0.18	0.08	0.11	1 00	2.00
Peru	0.32	0 41	0 70	1 00	2.27	0 16	0.46	0 78	1 00	2.46
Thailand	0 28	0 40	0 76	1 00	2,27	0 30	0.37	0 74	1,00	2,02
Uruguay	0 37	0 58	0 84	1.00	2 05	0.31	0.53	0 80	1.00	1.60
WEI mean	***0.27***	***0.48***	***0.64***	***1.00***	***2.54***	***0.27***	***0.40***	***0.61***	***1.00***	***2.17***

1. Year of reference 2000

Source: OECD/UNESCO WEI.

Table 9

Expenditure on educational institutions per student (1999)

Annual expenditure on educational institutions, from public and private sources, per full time equivalent student, in equivalent US$ converted using PPPs, by level of education

							Tertiary		
	Pre-primary (children aged 3+)	Primary	Lower secondary	Upper secondary	**All secondary**	Post secondary non tertiary	Tertiary, Type B programmes	Tertiary, Type A, and advanced research programmes	**All tertiary**
	1	2	3	4	5	6	7	8	9
WEI participants									
Argentina	[illegible]	[illegible]	1 198	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brazil[1, 2]	[illegible]	[illegible]	[illegible]	1 172	1 100	[illegible]	m	[illegible]	[illegible]
Chile	[illegible]	[illegible]	[illegible]	1 041	1 941	a	[illegible]	[illegible]	[illegible]
China	[illegible]	[illegible]	[illegible]	1 768	833	a	[illegible]	x(9)	7 798
India[2]	[illegible]	[illegible]	297	290	295	a	m	m	m
Indonesia[3, 4]	[illegible]	[illegible]	208	295	242	a	[illegible]	x(9)	1 047
Jamaica[1]	386	[illegible]	1 065	1 114	1 082	[illegible]	[illegible]	13 194	6 484
Jordan[1]	m	[illegible]	782	806	789	[illegible]	[illegible]	x(9)	5 082
Malaysia[1]	437	[illegible]	x(5)	x(5)	1 813	8 423	[illegible]	7 979	7 924
Paraguay	x(2)	877	x(5)	x(5)	1 545	a	[illegible]	6 750	5 465
Peru	442	483	x(5)	x(5)	579	m	675	2 057	1 414
Philippines[1, 2]	46	474	411	384	406	967	a	1 060	1 060
Tunisia[1, 3]	m	988	x(5)	x(5)	1 868	m	x(9)	x(9)	5 008
Uruguay[1]	1 133	1 000	1 114	1 484	1 275	a	x(9)	x(9)	2 239
Zimbabwe[1]	m	537	x(5)	x(5)	813	x(5)	m	m	m
WEI mean	***612***	***797***	***939***	***1 188***	***1 127***	~	~	~	***5 200***
OECD countries									
Australia*	m	4 858	6 710	7 066	6 850	7 650	7 993	12 588	11 725
Austria*	5 080	6 568	8 434	8 584	8 504	9 131	x(9)	x(9)	12 070
Belgium*	3 035	3 952	x(5)	x(5)	6 444	x(5)	x(9)	x(9)	9 724
Canada*	4 466	x(5)	x(5)	x(5)	5 981	x(9)	x(9)	15 470	15 211
Czech Republic*	2 404	1 769	2 998	4 043	3 449	832	1 886	6 679	5 688
Denmark*	4 208	6 721	6 904	8 270	7 626	m	x(9)	x(9)	10 657
Finland*	3 855	4 138	6 390	5 479	5 863	x(5)	4 500	8 474	8 114
France*	3 901	4 139	6 657	7 766	7 152	5 839	8 458	7 709	7 867
Germany*	4 937	3 818	4 918	10 107	6 603	11 679	5 495	11 209	10 393
Greece[1]*	x(2)	2 176	x(5)	x(5)	2 904	5 415	3 439	4 606	4 260
Hungary[1]*	2 458	2 179	2 017	2 756	2 368	2 983	x(9)	x(9)	5 861
Ireland	3 386	3 018	4 401	4 362	4 383	4 168	x(9)	x(9)	9 673
Italy[1]	5 133	5 354	6 206	6 741	6 518	m	7 147	7 557	7 552
Japan*	3 154	5 240	5 612	6 460	6 039	x(4,9)	7 649	10 749	10 278
Korea*	1 752	2 838	3 208	3 597	3 419	a	3 494	6 612	5 356
Mexico	1 204	1 096	1 129	2 226	1 480	a	x(9)	x(9)	4 789
Netherlands[5]*	3 848	4 162	5 747	5 575	5 670	m	7 227	12 354	12 285
Norway[1]	11 699	5 920	7 387	7 819	7 628	x(5)	x(9)	x(9)	12 096
Poland[2]	1 898	1 888	x(2)	1 583	1 583	x(4)	x(9)	3 912	3 912
Portugal*	2 165	3 478	4 958	5 422	5 181	a	x(9)	x(9)	4 802
Slovak Republic	1 880	x(3)	1 811	2 637	2 163	x(4)	x(9)	5 325	5 325
Spain	2 789	3 635	x(5)	x(5)	4 864	x(5)	5 111	5 760	5 707
Sweden	3 396	5 736	5 678	6 077	5 911	6 675	x(9)	x(9)	14 222
Switzerland[1, 6]*	2 764	6 663	7 824	11 819	9 756	7 960	13 421	18 584	17 997
Turkey[1]	m	m	m	m	m	m	x(9)	x(9)	4 328
United Kingdom*	6 233	3 627	x(5)	x(5)	5 608	x(5)	x(9)	x(9)	9 554
United States[7]*	6 692	6 582	x(5)	x(5)	8 157	x(9)	x(9)	x(9)	19 220
OECD mean	***3 847***	***4 148***	***5 210***	***5 919***	***5 465***	***4 795***	~	~	***9 210***

1. Only public institutions are included
2. Year of reference 1998
3. Year of reference 2000
4. Following decentralization in 2000, expenditure for some district offices has not been reported. The Indonesian authorities estimate that actual expenditure is probably 15 per cent higher than the figures reported in the WEI indicators
5. Public and government dependent private institutions only are included
6. Column 9 refers only to tertiary, Type A education.
7. Public and independent private institutions only are included

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002)

Source: OECD/UNESCO WEI

Table 10

Expenditure on educational institutions per student relative to GDP per capita (1999)

Expenditure on educational institutions, from public and private sources, per full time-equivalent student, relative to GDP per capita, by level of education

							Tertiary		
	Pre-primary (children aged 3+)	Primary	Lower secondary	Upper secondary	**All secondary**	Post secondary non tertiary	Tertiary, Type B programmes	Tertiary, Type A, and advanced research programmes	**All tertiary**
	1	2	3	4	5	6	7	8	9
WEI participants									
Argentina	11	11	18	21	18	a	37	88	88
Brazil[1, 7]	18	10	15	17	16	m	86	195	195
Chile	17	20	20	24	22	a	41	88	80
China	3	10	13	49	33	a	x(9)	x(9)	161
India[1]	2	12	16	20	17	a	m	m	m
Indonesia[3, 4]	9	8	8	11	10	a	x(9)	x(9)	41
Jamaica[1]	11	31	30	31	30	25	74	371	182
Jordan[1]	m	20	20	21	20	a	x(9)	x(9)	130
Malaysia[1]	5	12	x(5)	x(5)	14	103	93	97	96
Paraguay	x(2)	27	x(5)	x(5)	35	a	64	154	125
Peru	10	11	x(5)	x(5)	13	m	15	45	31
Philippines[1, 7]	2	11	15	15	15	35	a	84	42
Tunisia[1, 3]	m	16	x(5)	x(5)	29	m	x(9)	x(9)	79
Uruguay[1]	13	11	15	17	14	a	x(9)	x(9)	37
Zimbabwe[1]	m	19	x(5)	x(5)	28	x(5)	m	m	m
WEI mean	9	***14***	17	***22***	***21***	–	***47***	***125***	***95***
OECD countries									
Australia*	m	19	26	28	27	30	31	49	46
Austria*	20	26	33	33	33	36	x(9)	x(9)	47
Belgium*	12	16	x(5)	x(5)	26	x(5)	x(9)	x(9)	39
Canada*	17	x(5)	x(5)	x(5)	23	x(9)	x(9)	58	57
Czech Republic*	18	13	22	30	25	6	14	49	42
Denmark*	15	24	25	30	28	m	x(9)	x(9)	39
Finland*	16	18	27	23	25	x(5)	19	36	35
France*	17	18	29	34	31	25	37	33	34
Germany*	20	16	20	41	27	47	22	46	42
Greece[1]*	x(2)	14	x(5)	x(5)	18	34	22	29	27
Hungary[1]*	21	19	18	24	21	26	x(9)	x(9)	51
Ireland	13	12	17	17	17	16	x(9)	x(9)	37
Italy[1]	21	22	26	28	27	m	30	32	32
Japan*	13	21	23	26	24	x(4, 9)	31	43	41
Korea*	13	21	24	26	25	a	26	48	39
Mexico	14	13	14	27	18	a	x(9)	x(9)	57
Netherlands[5]*	15	16	22	21	21	m	27	47	46
Norway[1]	40	20	25	27	26	x(4)	x(9)	x(9)	43
Poland[1]	21	21	x(2)	18	18	x(4)	x(9)	44	44
Portugal*	13	20	29	32	30	a	x(9)	x(9)	28
Slovak Republic	17	x(3)	16	24	19	x(4)	x(8)	48	48
Spain	15	19	x(5)	x(5)	26	x(5)	27	30	30
Sweden	14	24	24	26	25	28	x(9)	x(9)	61
Switzerland[1, 6]*	10	23	27	41	34	28	47	65	63
Turkey[1]	m	m	m	m	m	m	x(9)	x(9)	73
United Kingdom*	27	16	x(5)	x(5)	24	x(5)	x(9)	x(9)	41
United States[7]*	20	20	x(5)	x(5)	24	x(9)	x(9)	x(9)	57
OECD mean	***18***	***19***	***23***	***28***	***25***	***21***	***28***	***44***	***44***

1. Only public institutions are included.
2. Year of reference 1998.
3. Year of reference 2000.
4. Following decentralization in 2000, expenditure for some district offices has not been reported. The Indonesian authorities estimate that actual expenditure is probably 15 per cent higher than the figures reported in the WEI indicators.
5. Public and government dependent private institutions only are included.
6. Column 9 refers only to tertiary, Type A education.
7. Public and independent private institutions only are included.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI.

Table 11

Expenditure on educational institutions as a percentage of GDP (1999)

Expenditure on educational institutions, by level of education and source of funds

	Primary, secondary and post secondary non tertiary			Tertiary			All levels of education		
	Public sources[1]	Private sources[2]	**Total** (Cols. 1+2)	Public sources[1]	Private sources[2]	**Total** (Cols. 4+5)	Public sources[1]	Private sources[2]	**Total** (Cols. 7+8)
	1	2	3	4	5	6	7	8	9
WEI participants									
Argentina	3.2	0.4	3.7	0.8	0.3	1.1	4.5	1.1	5.8
Brazil[3, 4]	3.5	m	m	1.6	m	m	5.1	m	m
Chile	3.1	1.4	4.5	0.6	1.6	2.3	4.1	3.1	7.3
China	2.8	1.1	3.9	0.5	0.4	0.8	2.0	1.6	3.7
India[4, 5]	3.5	0.1	2.6	x	n	0.6	3.2	0.1	3.3
Indonesia[3, 6, 7, 8]	1.6	0.2	0.8	0.7	0.2	0.8	0.8	0.4	1.2
Jamaica	4.7	2.8	7.5	1.7	0.5	2.2	6.3	3.6	9.9
Jordan[6]	4.1	0.1	4.1	1.6	0.9	2.5	5.0	1.0	6.0
Malaysia[3]	3.7	m	m	4.2	0.1	4.3	5.0	m	m
Paraguay	4.0	2.7	6.8	0.8	0.7	1.5	4.8	3.7	8.5
Peru[3, 6]	3.6	0.7	2.9	0.7	0.6	1.2	3.3	1.3	4.6
Philippines[9]	3.4	1.7	5.1	0.7	m	m	4.2	1.7	5.9
Russian Federation[3, 7]	m	m	m	m	m	m	3.0	m	m
Thailand[3, 7]	2.8	0.1	2.9	0.9	0.2	1.1	4.5	0.3	4.7
Tunisia[3, 7]	5.4	m	m	1.5	m	m	6.8	m	m
Uruguay[3, 6]	2.0	0.1	2.1	0.6	m	m	2.9	m	m
Zimbabwe[3, 5]	5.9	m	m	1.0	m	m	6.9	m	m
WEI mean	***3.3***	***1.0***	***3.8***	***0.8***	***0.5***	***1.3***	***4.3***	***1.7***	***5.5***
OECD countries									
Australia*	3.6	0.6	4.2	0.8	0.7	1.5	4.5	1.4	5.8
Austria[3]*	4.0	0.2	4.2	1.4	0.0	1.5	6.0	0.3	6.3
Belgium[3]*	3.5	m	m	1.3	m	m	5.3	0.3	5.5
Canada[10]*	3.5	0.3	3.8	1.6	1.0	2.5	5.3	1.3	6.6
Czech Republic*	2.8	0.4	3.2	0.8	0.1	0.9	4.2	0.6	4.7
Denmark[3]*	4.1	0.1	4.2	1.5	0.0	1.6	6.4	0.3	6.7
Finland*	3.6	0.0	3.6	1.8	0.0	1.8	5.7	0.1	5.8
France*	4.1	0.2	4.4	1.0	0.1	1.1	5.8	0.4	6.2
Germany*	2.8	0.9	3.7	1.0	0.1	1.1	4.3	1.2	5.6
Greece[3]*	2.4	0.3	2.6	1.0	n	1.0	3.6	0.3	3.9
Hungary	2.9	0.2	3.1	0.8	0.2	1.1	4.5	0.6	5.2
Ireland[6]	3.0	0.1	3.1	1.1	0.3	1.4	4.1	0.4	4.6
Italy	3.2	0.1	3.2	0.7	0.1	0.8	4.4	0.4	4.8
Japan[5]*	2.7	0.2	3.0	0.5	0.6	1.0	3.5	1.1	4.7
Korea*	3.2	0.8	4.0	0.5	1.9	2.4	4.1	2.7	6.8
Mexico	3.1	0.5	3.6	0.8	0.3	1.1	4.4	0.8	5.2
Netherlands*	2.9	0.2	3.1	1.0	0.3	1.3	4.3	0.4	4.7
New Zealand	4.6	m	m	0.9	m	m	5.9	m	m
Norway	4.0	0.0	4.0	1.4	0.1	1.5	6.5	0.1	6.6
Poland[3]	3.6	m	m	0.8	0.2	1.0	5.1	m	5.3
Portugal[3]*	4.2	n	4.2	1.0	0.1	1.1	5.6	0.1	5.7
Slovak Republic[3, 6]	3.0	0.0	3.0	0.8	0.1	0.8	4.3	0.1	4.4
Spain	3.2	0.4	3.7	0.9	0.3	1.1	4.4	0.9	5.3
Sweden[6]	4.4	0.0	4.4	1.5	0.2	1.7	6.5	0.2	6.7
Switzerland	3.9	0.5	4.4	1.2	n	1.2	5.4	0.5	5.9
Turkey[3]*	2.9	m	2.9	1.0	0.0	1.0	3.9	0.0	3.9
United Kingdom*	3.3	0.4	3.7	0.8	0.3	1.1	4.4	0.7	5.2
United States[10]*	3.5	0.4	3.8	1.1	1.2	2.3	4.9	1.6	6.5
OECD mean	***3.4***	***0.3***	***3.6***	***1.0***	***0.3***	***1.3***	***4.9***	***0.6***	***5.5***

1. Includes public subsidies to households attributable for educational institutions. Includes direct expenditure on educational institutions from international sources.
2. Values are net of public subsidies attributable for educational institutions.
3. Public subsidies to households are included in private expenditure and not in public expenditure.
4. Year of reference 1998.
5. Post secondary non tertiary is included in both upper secondary and tertiary education.
6. Direct expenditure on educational institutions from international sources exceeds 1.5 per cent of all public expenditure for primary and secondary levels in Uruguay; tertiary level in Indonesia, Jordan, Uruguay, Ireland, Slovak Republic and Sweden; and all levels of education combined in Indonesia, Jordan and Uruguay.
7. Year of reference 2000.
8. Following decentralization in 2000, expenditure for some district offices has not been reported. The Indonesian authorities estimate that actual expenditure is probably 15 per cent higher than the figures reported in the WEI indicators.
9. Columns 1–3 exclude post secondary non tertiary education.
10. Post secondary non-tertiary is included in tertiary education.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI

Table 12

Expenditure on educational institutions as a percentage of GDP (1999)

Expenditure on educational institutions from public and private sources[1], by level of education

	Pre primary (children aged 3+)	Primary, secondary and post-secondary non-tertiary				Tertiary education			All levels of education[7]
		Primary and lower secondary	Upper secondary	Post-secondary non-tertiary	**Total** (Cols. 2+3+4)	Type B programmes	Type A and advanced research programmes	**Total tertiary** (Cols. 6+7)	
	1	2	3	4	5	6	7	8	9
WEI participants									
Argentina[2]	0.1	1.0	0.8	x	1.7	0.1	0.5	1.1	3.1
Brazil[2, 3]	0.4	1.0	0.6	m	1.7	m	1.1	1.1	3.1
Chile	0.5	1.3	1.4	a	2.7	x	x	1.2	4.2
China	0.1	1.7	0.9	a	2.6	x(8)	x(8)	0.8	3.5
India[3]	n	2.4	0.7	x(3.8)	3.0	0.1	0.5	0.5	3.6
Indonesia[4, 5]	n	0.6	0.2	a	0.8	x(8)	x(8)	0.4	1.2
Jamaica	0.7	5.8	1.6	0.1	7.6	0.4	1.2	1.5	9.8
Jordan	n	3.5	0.6	a	4.1	x(8)	x(8)	1.8	5.9
Malaysia[5]	0.1	1.6	3.0	0.2	4.7	0.2	1.1	1.3	6.1
Paraguay[5]	x(5)	4.0	1.8	a	5.8	0.3	1.3	1.5	8.5
Peru	0.4	2.6	0.6	m	3.2	0.3	1.0	1.2	4.8
Philippines[3]	n	4.1	0.9	n	5.0	a	m	m	m
Russian Federation[2, 4]	x(9)	x(9)	x(9)	x(9)	x(9)	x(9)	x(9)	x(9)	3.0
Thailand	0.2	2.4	0.5	m	2.9	0.2	0.9	1.1	4.7
Tunisia[2, 4]	m	x(5)	x(5)	m	5.4	x(8)	x(8)	1.5	6.8
Uruguay	0.3	1.6	0.5	a	2.1	m	0.6	0.6	3.0
Zimbabwe[2]	n	3.9	2.0	x(3.8)	5.9	0.4	0.6	1.0	6.9
WEI mean	***0.2***	***2.9***	***1.0***	***--***	***4.0***	***0.2***	***1.0***	***1.2***	***5.3***
OECD countries									
Australia*	0.1	3.2	0.9	0.1	4.2	0.2	1.3	1.5	5.8
Austria*	0.5	2.8	1.3	n	4.2	0.3	1.2	1.5	6.3
Belgium[2, 6]*	0.5	1.2	2.3	x(3)	3.5	x(8)	x(8)	1.3	5.3
Canada*	0.2	x(5)	x(5)	x(8)	3.8	1.1	1.4	2.5	6.6
Czech Republic*	0.5	2.0	1.2	n	3.2	0.1	0.9	0.9	4.7
Denmark*	0.8	2.7	1.4	m	4.2	x(8)	x(8)	1.6	6.7
Finland*	0.4	2.4	1.3	x(3)	3.6	0.1	1.7	1.8	5.8
France*	0.7	2.8	1.5	n	4.4	0.3	0.9	1.1	6.2
Germany*	0.6	2.1	1.3	0.3	3.7	0.1	1.0	1.1	5.6
Greece[2]*	x(5)	1.1	1.4	0.2	2.6	0.2	0.8	1.0	3.9
Hungary	0.8	1.8	1.1	0.2	3.1	n	1.1	1.1	5.2
Ireland	n	2.3	0.7	0.1	3.1	x(8)	x(8)	1.4	4.6
Italy	0.4	1.8	1.3	0.1	3.2	n	0.8	0.8	4.8
Japan*	0.2	2.0	0.9	x(3.8)	3.0	0.1	0.9	1.0	4.7
Korea*	0.1	2.7	1.3	a	4.0	0.6	1.8	2.4	6.8
Mexico	0.5	2.8	0.8	a	3.6	x(8)	x(8)	1.1	5.2
Netherlands*	0.4	2.3	0.8	n	3.1	n	1.3	1.3	4.7
New Zealand[2]	0.2	3.3	1.2	0.1	4.6	0.1	0.8	0.9	5.9
Norway	0.8	2.8	1.3	x(3)	4.0	n	1.5	1.5	6.6
Poland[2]	0.5	2.5	1.2	m	3.7	n	1.0	1.0	5.3
Portugal*	0.3	2.8	1.2	a	4.2	x(8)	x(8)	1.1	5.7
Slovak Republic	0.5	1.8	1.2	x(3)	3.0	x(8)	0.8	0.8	4.4
Spain	0.4	3.7	x(2)	x(2)	3.7	0.1	1.0	1.1	5.3
Sweden	0.6	3.0	1.4	n	4.4	x(8)	x(8)	1.7	6.7
Switzerland	0.2	2.8	1.6	0.1	4.4	0.1	1.1	1.2	5.9
Turkey*	m	2.1	0.8	a	2.9	x(8)	1.0	1.0	3.9
United Kingdom[6]*	0.4	1.2	2.4	x(3)	3.7	x(8)	x(8)	1.1	5.2
United States*	0.4	x(5)	x(5)	x(8)	3.8	x(8)	x(8)	2.3	6.5
OECD mean	***0.4***	***2.3***	***1.3***	***0.1***	***3.6***	***0.2***	***1.1***	***1.3***	***5.5***

1. Including international sources.
2. Including only direct public expenditure on educational institutions.
3. Year of reference 1998.
4. Year of reference 2000.
5. Following decentralization in 2000, expenditure for some district offices has not been reported. The Indonesian authorities estimate that actual expenditure is probably 15 per cent higher than the figures reported in the WEI indicators.
6. Lower secondary is included in upper secondary education.
7. Includes expenditure that is unallocated by ISCED level.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI.

Table 13

Relative proportions of public and private expenditure on educational institutions (1999)

Distribution of public and private sources of funds for educational institutions after transfers from public sources, by level of education

	Pre-primary (aged 3+)		Primary, secondary and post-secondary non-tertiary		Tertiary		All levels of education	
	Public sources	Private sources[1]	Public sources	Private sources	Public sources	Private sources[1]	Public sources	Private sources[1]
	1	2	3	4	5	6	7	8
WEI participants								
[illegible]	m	m	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Chile	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
China	54.6	[illegible]	55.8	44.2	56.8	43.2	55.8	44.2
India[2, 3]	95.3	4.7	95.3	[illegible]	99.7	0.3	96.2	3.8
Indonesia[4, 5]	5.3	94.7	76.6	23.4	43.8	56.2	64.5	35.5
Jamaica	49.4	50.6	61.8	38.2	70.4	29.6	62.2	37.6
Jordan	m	m	98.4	1.6	48.1	51.9	83.7	16.3
Malaysia	m	m	m	m	92.7	7.3	m	m
Paraguay	m	m	59.5	40.5	51.2	48.8	56.4	43.6
Peru[3]	80.3	19.7	76.8	23.2	54.5	45.5	71.6	28.4
Philippines[3]	m	m	66.8	33.2	m	m	m	m
Thailand[4]	92.6	7.4	97.8	2.2	83.3	16.7	94.6	5.4
Uruguay	87.4	12.6	93.6	6.4	m	m	m	m
WEI mean	***66.9***	[illegible]	***78.3***	***21.7***	***62.8***	***37.2***	***71.7***	***28.3***
OECD countries								
Australia*	62.9	37.1	85.4	14.6	52.4	47.6	76.5	23.5
Austria*	86.5	13.5	96.4	3.6	98.7	1.3	95.4	4.6
Belgium[6]*	95.2	4.8	92.7	7.3	100.0	n	95.0	5.0
Canada[7]*	x	x	92.3	7.7	59.3	40.7	79.8	20.2
Czech Republic*	89.3	10.7	88.8	11.2	84.7	15.3	87.6	12.4
Denmark[7]*	81.9	18.1	97.8	2.2	97.7	2.3	96.0	4.0
Finland*	84.8	15.2	99.4	0.6	97.4	2.6	97.8	2.2
France*	95.8	4.2	92.8	7.2	85.7	14.3	91.9	8.1
Germany*	62.2	37.8	75.6	24.4	91.5	8.5	77.9	22.1
Greece*	m	m	90.2	9.8	99.9	0.1	93.4	6.6
Hungary	89.1	10.9	92.2	7.8	76.6	23.4	87.9	12.1
Ireland	32.3	67.7	96.7	3.3	73.4	26.6	89.6	10.4
Italy	98.7	1.3	98.3	1.7	80.3	19.7	90.3	9.7
Japan[7]*	48.6	51.4	91.8	8.2	44.5	55.5	75.6	24.4
Korea*	23.2	76.8	80.2	19.8	20.7	79.3	58.7	41.3
Mexico	87.5	12.5	85.2	14.8	71.8	28.2	82.6	17.4
Netherlands*	96.9	3.1	93.9	6.1	77.6	22.4	89.7	10.3
Norway	100.0	n	99.1	0.9	94.4	5.6	98.2	1.8
Poland[8]	m	m	m	m	82.8	17.2	m	m
Portugal*	m	m	99.9	0.1	92.9	7.1	98.7	1.3
Slovak Republic	98.6	1.4	99.6	0.4	91.9	8.1	97.8	2.2
Spain	77.9	22.1	87.9	12.1	74.2	25.8	82.3	17.7
Sweden	100.0	a	99.8	0.2	88.4	11.6	97.0	3.0
Switzerland	99.9	0.1	87.7	12.3	96.7	3.3	90.0	10.0
Turkey*	m	m	m	m	95.3	4.7	98.8	1.2
United Kingdom*	95.6	4.4	88.2	11.8	63.2	36.8	83.7	16.3
United States[7]*	90.3	9.7	90.7	9.3	46.9	53.1	75.0	25.0
OECD mean	***81.7***	***18.3***	***92.1***	***7.9***	***79.2***	***20.8***	***88.0***	***12.0***

1 Includes subsidies attributable to payments to educational institutions received from public sources.
2 Post-secondary non-tertiary is included in tertiary education or missing.
3 Year of reference 1998.
4 Year of reference 2000.
5 Estimated on the basis of available reports from district offices. Following decentralization in 2000, expenditure for some district offices has not been reported.
6 Only data for Flemish Belgium are disaggregated by level of education.
7 Post-secondary non-tertiary is included in both upper secondary and tertiary education.
8 Primary, secondary and post secondary non-tertiary education includes tertiary, Type B education.
* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002)
Source: OECD/UNESCO WEI.

Table 14

Total public expenditure on education (1999)

Public expenditure[1] on educational institutions plus public subsidies to households (which include subsidies for living costs and other private entities), as a percentage of total public expenditure and as a percentage of GDP, by level of education

	Public expenditure on education as a percentage of total public expenditure			Public expenditure on education as a percentage of GDP		
	Primary, secondary and post-secondary non-tertiary	Tertiary	**All levels of education**	Primary, secondary and post-secondary non tertiary	Tertiary	**All levels of education**
	1	2	3	4	5	6
WEI participants						
Argentina	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brazil[2]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	5.2
Chile	[illegible]	[illegible]	[illegible]	[illegible]	0.7	4.2
China	[illegible]	[illegible]	[illegible]	[illegible]	0.5	2.1
India[3, 7]	9.8	2.4	[illegible]	[illegible]	0.6	3.2
Indonesia[4, 5]	4.0	1.2	[illegible]	[illegible]	0.2	0.8
Jamaica	8.1	2.0	[illegible]	[illegible]	1.2	6.3
Jordan	16.7	3.8	20.6	4.1	0.9	5.0
Malaysia	16.5	8.3	25.2	3.7	1.9	5.7
Paraguay	7.3	1.5	8.8	4.0	0.8	4.8
Peru[6]	14.3	4.3	21.1	2.3	0.7	3.3
Philippines[7]	16.8	3.4	20.6	3.4	0.7	4.2
Russian Federation[4]	x(3)	x(3)	10.4	x(6)	x(6)	3.0
Thailand[4]	16.9	6.7	28.0	3.0	1.2	4.9
Tunisia[4]	13.6	3.8	17.4	5.4	1.5	6.8
Uruguay	9.1	2.7	13.0	1.9	0.6	2.8
Zimbabwe[3]	m	m	m	5.8	1.2	7.0
WEI mean	***13.6***	***3.4***	***15.6***	***[illegible]***	***0.9***	***4.3***
OECD countries						
Australia*	11.0	3.4	14.6	3.8	1.2	5.0
Austria*	8.0	3.2	12.4	4.1	1.7	6.3
Belgium*	6.9	3.0	11.0	3.5	1.5	5.5
Canada[1]*	m	m	m	3.5	1.9	5.7
Czech Republic*	6.6	1.9	9.7	3.0	0.8	4.4
Denmark*	8.7	4.3	14.9	4.8	2.4	8.1
Finland*	7.6	4.2	12.5	3.8	2.1	6.2
France*	8.0	2.0	11.5	4.2	1.1	6.0
Germany*	6.2	2.3	9.7	3.0	1.1	4.7
Greece*	4.5	2.0	7.0	2.4	1.1	3.6
Hungary	8.0	2.6	12.8	2.9	0.9	4.7
Ireland	9.4	3.6	13.2	3.1	1.2	4.3
Italy	6.6	1.7	9.4	3.2	0.8	4.5
Japan[7]*	7.1	1.2	9.3	2.7	0.5	3.5
Korea*	13.7	2.4	17.4	3.2	0.6	4.1
Mexico	16.0	4.3	22.6	3.1	0.8	4.4
Netherlands*	6.8	2.9	10.4	3.1	1.3	4.8
New Zealand	m	m	m	4.8	1.2	6.3
Norway	9.0	4.2	15.6	4.3	2.0	7.4
Poland	8.3	1.9	11.8	3.6	0.8	5.2
Portugal*	9.7	2.4	13.1	4.2	1.0	5.7
Slovak Republic	9.6	2.5	13.8	3.0	0.8	4.3
Spain	8.2	2.3	11.3	3.3	0.9	4.5
Sweden	8.9	3.7	13.6	5.1	2.1	7.7
Switzerland	11.0	3.4	15.2	4.0	1.2	5.5
Turkey*	m	m	m	2.9	1.1	4.0
United Kingdom*	8.1	2.6	11.8	3.3	1.1	4.7
United States[1]*	m	m	m	3.5	1.4	5.2
OECD mean	***8.7***	***2.8***	***12.7***	***3.5***	***1.2***	***5.2***

1. Public expenditure presented in this table includes public subsidies to households for living costs, which are not spent on educational institutions. Thus the data here exceeds the Table 11 data on public spending on institutions.
2. Year of reference 1998.
3. Post-secondary non-tertiary is included in tertiary education and excluded from primary, secondary and post-secondary non-tertiary education.
4. Year of reference 2000.
5. Following decentralization in 2000, expenditure for some district offices has not been reported. The Indonesian authorities estimate that actual expenditure is probably 15 per cent higher than the figures reported in the WEI indicators.
6. Columns 1 and 4 exclude post secondary non-tertiary education.
7. Excludes public subsidies to the private sector. Post-secondary non-tertiary is included in both upper secondary and tertiary education.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002)

Source: OECD/UNESCO WEI

Table 15

Distribution of total public expenditure on education (1999)

Direct public expenditure on educational institutions and indirect public transfers to the private sector as a percentage of total public expenditure on education, by level of education

	Primary, secondary and post-secondary non-tertiary			Tertiary			All levels of education		
	Direct public expenditure on public institutions	Direct public expenditure on private institutions	Indirect public transfers and payments to the private sector	Direct public expenditure on public institutions	Direct public expenditure on private institutions	Indirect public transfers and payments to the private sector	Direct public expenditure on public institutions	Direct public expenditure on private institutions	Indirect public transfers and payments to the private sector
	1	2	3	4	5	6	7	8	9
WEI participants									
Argentina	85.7	13.5	1.8	88.2	7.8	4.0	88.1	10.4	1.6
Brazil	98.2	1.9	n	93.1	6.9	n	97.2	1.5	1.3
Chile	67.8	31.8	0.4	47.2	41.8	11.0	63.8	33.0	3.1
China	99.2	x	0.8	99.5	x	0.5	97.9	x	2.1
India[1, 2]	70.7	29.1	0.2	78.2	13.7	8.1	72.2	27.6	0.2
Indonesia[3, 4]	90.0	6.5	3.5	m	m	m	m	m	m
Jamaica	98.2	x	1.8	98.3	x	1.7	95.6	4.4	0.0
Jordan	100.0	x	a	88.1	x	11.9	97.8	x	2.2
Malaysia	98.9	0.6	0.5	66.1	x	33.9	88.2	8.8	3.0
Paraguay	92.5	7.4	0.1	m	m	m	m	m	m
Philippines[3]	98.7	a	1.3	97.5	a	2.5	98.5	a	1.5
Thailand[3]	93.3	2.2	4.5	74.9	x	25.1	88.9	2.0	9.1
Uruguay	99.9	a	0.1	100.0	a	x	100.0	a	n
WEI mean	***91.8***	***4.1***	***4.1***	***84.4***	***5.3***	***10.3***	***89.8***	***7.0***	***3.2***
OECD countries									
Australia*	79.6	16.1	4.3	67.7	n	32.3	75.9	12.1	10.8
Austria*	96.7	1.8	1.5	85.5	1.5	13.1	92.5	2.7	4.7
Belgium*	44.9	54.7	0.4	35.0	49.0	15.9	43.3	52.1	4.6
Canada[1]*	98.3	1.7	x	77.7	0.4	21.8	91.5	1.2	7.3
Czech Republic*	91.5	3.2	5.3	91.1	1.4	7.6	92.3	2.6	5.1
Denmark[1]*	78.9	6.5	14.6	64.8	n	35.2	75.3	4.1	20.6
Finland*	91.8	4.2	3.9	74.9	8.1	17.1	86.1	5.8	8.2
France*	83.0	13.3	3.7	88.7	3.3	8.0	85.2	10.9	4.0
Germany*	85.4	7.9	6.7	85.4	2.4	12.3	82.1	10.7	7.2
Greece*	99.9	a	0.1	96.6	a	3.4	98.9	a	1.1
Hungary	92.5	6.9	0.6	83.2	4.3	12.6	91.3	5.7	2.9
Ireland	96.9	n	3.1	85.2	n	14.8	93.7	n	6.3
Italy	93.7	5.4	0.9	81.3	1.6	17.1	91.6	4.4	4.0
Japan[5]*	96.5	3.5	m	83.0	17.0	m	93.6	6.4	m
Korea*	86.6	11.7	1.7	59.8	28.1	12.1	83.7	13.0	3.2
Mexico	97.2	0.1	2.7	94.3	m	5.7	96.9	0.1	3.1
Netherlands*	21.9	70.7	7.4	39.3	36.1	24.6	27.4	61.0	11.6
New Zealand	95.5	1.4	3.2	75.9	1.9	22.2	90.9	2.1	7.0
Norway	91.9	2.2	5.9	69.0	2.4	28.6	83.3	4.6	12.2
Portugal*	92.0	6.7	1.3	94.0	n	6.0	91.8	6.2	2.1
Slovak Republic	96.6	3.4	0.0	95.6	m	4.4	96.7	2.5	0.9
Spain	85.5	13.5	1.0	89.9	0.7	9.3	86.9	10.4	2.7
Sweden	83.7	2.7	13.6	64.7	4.9	30.4	78.9	3.9	17.1
Switzerland	90.0	7.1	2.8	89.3	6.6	4.1	89.6	6.8	3.6
Turkey*	99.8	a	0.2	87.8	0.4	11.8	96.5	0.1	3.4
United Kingdom*	78.7	21.1	0.2	a	73.3	26.7	64.7	29.8	5.5
United States[1]*	99.7	0.3	x	67.6	13.2	19.2	90.5	4.5	5.0
OECD mean	***87.0***	***9.9***	***3.5***	***75.1***	***9.9***	***16.4***	***84.0***	***9.7***	***6.4***

1. Post-secondary non-tertiary included in tertiary education or missing.
2. Year of reference 1998.
3. Year of reference 2000.
4. Estimated on the basis of available reports from district offices. Following the inauguration of decentralization in 2000, expenditure for some district offices have not been reported.
5. Post-secondary non-tertiary included in both upper secondary and tertiary education.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI.

Table 16

Public subsidies to the private sector as a percentage of total government expenditure on education and GDP for tertiary education (1999)

Subsidies for households and other private entities as a percentage of total government expenditure on education and GDP

	Public subsidies for education to private entities as a percentage of total government expenditure					
	Financial aid to students					
	Scholarships/ other grants to households	Student loans	**Total aid to students** (Cols. 1+2)	Transfers and payments to other private entities	**Total subsidies** (Cols. 3+4)	Public subsidies for education to private entities as a percentage of GDP
	1	2	3	4	5	6
WEI participants						
Argentina	x	x	x	0.9	3.9	x
Brazil[1]	1.3	4.8	6.1	n	6.1	0.1
Chile	10.8	14.1	24.9	a	25.0	0.3
China	6.3	x	6.3	a	6.3	n
India[1]	0.3	x	0.3	x	0.3	n
Jamaica	1.7	m	1.7	n	1.7	n
Jordan	11.9	a	11.9	a	11.9	0.1
Malaysia	13.2	30.7	43.9	a	43.9	0.6
Paraguay	2.0	m	2.0	a	2.0	n
Peru	0.2	0.9	1.1	n	1.1	n
Philippines[1]	1.0	1.6	2.5	a	2.5	n
Thailand[2]	m	9.3	9.3	m	9.3	0.3
Uruguay	n	x	n	a	n	n
Zimbabwe[1, 3]	4.0	8.7	12.7	x	12.7	0.1
WEI mean	***4.2***	***6.0***	***9.1***	***-***	***9.2***	***0.1***
OECD countries						
Australia	14.6	17.7	32.3	n	32.3	0.4
Austria	10.4	a	10.4	2.6	13.1	0.2
Belgium	15.9	n	15.9	n	15.9	0.2
Canada[3]*	12.2	6.4	18.6	3.2	21.8	0.4
Czech Republic*	7.6	a	7.6	n	7.6	0.1
Denmark*	30.3	4.9	35.2	n	35.2	0.8
Finland	16.4	n	16.4	0.7	17.1	0.4
France	8.0	a	8.0	a	8.0	0.1
Germany*	10.1	1.9	12.0	0.3	12.3	0.1
Greece	3.4	m	3.4	a	3.4	0.0
Hungary	12.6	a	12.6	n	12.6	0.1
Ireland*	14.8	n	14.8	n	14.8	0.2
Italy	16.9	n	16.9	0.1	17.1	0.1
Korea	2.4	6.4	8.8	3.3	12.1	0.1
Mexico	2.8	2.9	5.7	n	5.7	0.0
Netherlands	18.4	6.2	24.6	n	24.6	0.3
New Zealand	22.2	a	22.2	n	22.2	0.3
Norway	11.3	17.3	28.6	n	28.6	0.6
Poland	0.4	2.7	3.2	m	3.2	0.0
Portugal	6.0	m	6.0	m	6.0	0.1
Slovak Republic	2.5	1.9	4.4	a	4.4	0.0
Spain	9.3	n	9.3	n	9.3	0.1
Sweden	10.1	20.3	30.4	a	30.4	0.6
Switzerland*	0.8	n	0.8	3.3	4.1	0.1
Turkey	1.5	10.2	11.8	n	11.8	0.1
United Kingdom	23.1	13.3	36.4	n	36.4	0.4
United States[3]*	11.1	8.1	19.2	m	19.2	0.3
OECD mean	***10.9***	***4.7***	***15.4***	***0.6***	***15.9***	***0.2***

1. Year of reference 1998.
2. Year of reference 2000.
3. Includes post-secondary non-tertiary education.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI.

Table 17

Household expenditure and public subsidies per student, converted in equivalent US$ using PPPs (1999)

Household expenditure on educational institutions, including fees for ancillary services and government aid to households, by level of education

	Household expenditure on tuition fees per student			Subsidies received from government sources per student for tuition fees, ancillary services and living costs		
	Primary, secondary and post-secondary non-tertiary	Tertiary	All levels of education	Primary, secondary and post-secondary non-tertiary	Tertiary	All levels of education
	1	2	3	4	5	6
WEI Participants						
Indonesia[3,4]	56	1 811	591	41	45	43
Israel[1,2]	11	m	m	m	892	17
Chile	548	5 036	1	[illegible]	483	[illegible]
China	93	1 225	[illegible]	[illegible]	222	8
India[3]	9	m	[illegible]	[illegible]	m	m
Indonesia[3,4]	29	502	[illegible]	[illegible]	m	m
Jamaica[1]	494	1 258	[illegible]	[illegible]	69	17
Jordan[1]	13	1 796	[illegible]	[illegible]	225	19
Malaysia[1]	n	650	[illegible]	[illegible]	4 251	224
Paraguay	433	2 666	[illegible]	n	58	4
Peru[4]	120	643	[illegible]	n	8	1
Philippines[1, 7]	278	m	[illegible]	7	40	10
Thailand[3]	n	n	n	n	n	n
Uruguay[1]	68	m	m	1	1	1
Zimbabwe[1]	m	m	m	m	1 184	m
WEI mean	***192***	***1 701***	***398***	***6***	***621***	***35***
OECD countries						
Australia	683	3 836	1 140	220	2 935	599
Austria	117	101	171	57	1 432	291
Belgium	x	x	284	x	x	261
Canada[6]	189	3 534	835	m	2 148	m
Czech Republic	236	324	254	135	392	145
Denmark	164	249	298	1 234	5 656	1 845
Finland	m	m	m	197	1 559	466
France	345	825	380	210	583	226
Germany	m	m	m	323	1 293	399
Greece[1]	314	2	225	3	151	34
Hungary[1]	106	360	155	13	670	78
Ireland	121	2 268	438	114	1 190	273
Italy[1]	74	1 023	585	54	1 183	256
Japan[7]	420	5 705	1 437	m	m	m
Korea	558	3 350	1 282	41	111	59
Mexico	181	1 318	251	30	208	38
Netherlands	258	1 428	384	372	3 108	676
New Zealand	m	m	m	146	1 494	345
Norway[1]	15	356	66	425	4 975	1 187
Poland[1, 8]	m	655	m	x	103	15
Portugal	3	339	60	60	285	93
Slovak Republic	3	141	19	n	218	18
Spain	564	1 462	831	40	432	105
Sweden	9	n	7	918	5 355	1 274
Switzerland[1]	m	m	m	120	168	158
Turkey[1]	m	213	m	2	579	42
United Kingdom	593	2 414	862	12	2 195	334
United States[2]	684	7 299	1 918	m	2 134	m
OECD mean	***256***	***1 550***	***540***	***189***	***1 502***	***369***

1. Only public institutions are included.
2. Year of reference 1998.
3. Year of reference 2000.
4. Following decentralization in 2000, expenditure for some district offices has not been reported. The Indonesian authorities estimate that actual expenditure is probably 15 per cent higher than the figures reported in the WEI indicators.
5. Excludes post-secondary non-tertiary education.
6. Post-secondary non-tertiary is included in tertiary education and excluded from primary, secondary and post-secondary non-tertiary education.
7. Post secondary non tertiary is shared between upper secondary and tertiary education.
8. Primary, secondary and post secondary non tertiary education are included in tertiary, Type B education.

Source: OECD/UNESCO WEI.

Table 18

Expenditure on educational institutions by resource category (1999)

Distribution of total and current expenditure on educational institutions from public and private sources, by resource category and level of education

	Primary, secondary and post-secondary non-tertiary						Tertiary					
	Percentage of total expenditure		Percentage of current expenditure				Percentage of total expenditure		Percentage of current expenditure			
	Current	Capital	Compensation of teachers	Compensation of other staff	**Total staff compensation** (Cols 3+4)	Other current	Current	Capital	Compensation of teachers	Compensation of other staff	**Total staff compensation** (Cols 9+10)	Other current
	1	2	3	4	5	6	7	8	9	10	11	12
WEI participants												
Argentina[1]	93.4	6.6	67.1	24.9	92.0	8.0	97.9	2.1	56.2	34.9	91.1	8.9
Brazil[1, 7]	94.8	5.2	x(5)	x(5)	81.9	18.1	97.6	2.4	x(11)	x(11)	86.3	13.7
China	91.2	8.8	x(5)	x(5)	64.3	35.7	77.6	22.4	x(11)	x(11)	46.0	54.0
India[1, 3]	97.2	2.8	79.5	8.4	87.8	12.2	96.9	3.1	x(11)	x(11)	99.6	0.4
Indonesia[1, 4, 5]	93.9	6.1	78.0	7.6	85.6	14.4	82.0	18.0	87.2	11.8	99.0	1.0
Jamaica[1]	90.9	9.1	57.4	10.0	67.3	32.7	92.3	7.7	53.6	29.2	82.7	17.3
Jordan[1]	89.0	11.0	77.8	14.7	92.5	7.5	76.5	23.5	x(11)	x(11)	67.6	32.4
Malaysia[1]	77.3	22.7	65.8	14.8	80.6	19.4	61.7	38.3	42.1	9.2	51.4	48.6
Paraguay[1]	90.7	9.3	59.6	11.3	70.9	29.1	87.0	13.0	m	m	m	m
Peru[1, 6]	89.2	10.9	89.3	2.0	91.3	8.7	88.8	11.2	46.0	9.0	55.0	45.0
Tunisia[1, 4]	88.7	11.3	x(5)	x(5)	95.1	4.9	74.1	25.9	x(11)	x(11)	70.0	30.0
Uruguay[1]	92.7	7.3	72.9	12.3	85.2	14.8	94.2	5.8	64.0	21.6	85.6	14.4
WEI mean	***90.7***	***9.3***	***71.9***	***11.8***	***82.9***	***17.1***	***85.6***	***14.4***	***58.2***	***19.3***	***75.8***	***24.2***
OECD countries												
Australia	93.7	6.3	56.3	15.6	71.9	28.1	89.9	10.1	35.1	30.2	65.3	34.7
Austria	93.5	6.5	73.3	7.9	81.2	18.8	95.4	4.6	53.6	14.2	67.8	32.2
Belgium (Fl.)	97.2	2.8	67.4	11.7	79.1	20.9	97.3	2.7	50.6	0.7	51.4	48.6
Canada[3]	96.4	3.6	61.7	15.1	76.8	23.2	95.4	4.6	x(11)	x(11)	71.7	28.3
Czech Republic	91.9	8.1	45.5	16.5	62.1	37.9	87.6	12.4	29.2	21.1	50.3	49.7
Denmark	95.1	4.9	50.3	25.0	75.3	24.7	87.3	12.7	50.8	24.8	75.6	24.4
Finland	92.9	7.1	56.8	12.1	68.9	31.1	93.2	6.8	35.4	26.4	61.8	38.2
France	91.4	8.6	x(5)	x(5)	78.6	21.4	89.2	10.8	x(11)	x(11)	70.0	30.0
Germany	92.3	7.7	x(5)	x(5)	88.8	11.2	88.9	11.1	x(11)	x(11)	76.2	23.8
Greece[1]	85.8	14.2	x(5)	x(5)	96.4	3.6	62.9	37.1	x(11)	x(11)	58.4	41.6
Hungary[1]	92.6	7.4	x(5)	x(5)	75.2	24.8	86.9	13.1	x(11)	x(11)	63.2	36.8
Ireland[1]	92.2	7.8	80.0	4.8	84.9	15.1	88.9	11.1	48.1	24.6	72.7	27.3
Italy[1]	94.8	5.2	63.6	16.6	80.2	19.8	82.7	17.3	43.8	22.5	66.3	33.7
Japan[7]	87.6	12.4	x(5)	x(5)	88.1	11.9	81.5	18.5	x(11)	x(11)	68.4	31.6
Korea	85.6	14.4	75.3	8.5	83.8	16.2	66.9	33.1	44.8	15.0	59.8	40.2
Mexico[1]	97.6	2.4	82.9	12.0	94.9	5.1	86.7	13.3	71.0	15.3	86.3	13.7
Netherlands[8]	95.7	4.3	x(5)	x(5)	75.9	24.1	94.0	6.0	m	m	76.2	23.8
Norway	86.3	13.7	x(5)	x(5)	82.3	17.7	88.7	11.3	x(11)	x(11)	62.1	37.9
Poland[1]	92.7	7.3	x(5)	x(5)	74.9	25.1	94.4	5.6	x(11)	x(11)	75.2	24.8
Portugal	95.4	4.6	x(5)	x(5)	93.7	6.3	85.1	14.9	x(11)	x(11)	75.9	24.1
Slovak Republic	96.8	3.2	60.6	16.8	77.4	22.6	89.9	10.1	48.8	40.4	89.3	10.8
Spain	93.9	6.1	76.1	9.5	85.6	14.4	79.1	20.9	57.1	21.1	78.2	21.8
Sweden	m	m	47.8	13.7	61.8	38.2	m	m	x(11)	x(11)	56.6	43.4
Switzerland[1]	90.4	9.6	72.4	12.9	85.3	14.7	83.2	16.8	54.4	21.5	75.8	24.2
Turkey[1]	80.6	19.4	96.8	m	96.8	3.2	79.7	20.3	51.1	34.1	85.2	14.8
United Kingdom	93.9	6.1	49.0	18.1	67.2	32.8	97.2	2.8	32.5	25.0	57.6	42.4
United States[1, 3]	88.1	11.9	55.9	26.4	82.3	17.7	90.7	9.3	40.4	35.5	75.9	24.1
OECD mean	***92.1***	***7.9***	***65.1***	***14.3***	***80.3***	***19.7***	***87.0***	***13.0***	***46.7***	***23.3***	***69.4***	***30.6***

1. Only public institutions are included.
2. Year of reference 1998.
3. Post-secondary non-tertiary education is included in tertiary education.
4. Year of reference 2000.
5. Estimated on the basis of available reports from district offices. Following the inauguration of decentralization in 2000, expenditure for some district offices have not been reported.
6. Excludes post-secondary non-tertiary education.
7. Post-secondary non-tertiary is included in both upper secondary and tertiary education.
8. Public and government-dependent private institutions only are included.

Source: OECD/UNESCO WEI.

Table 19

Government expenditure by destination

Expenditure of central government on different functions as a percentage of GDP and central government revenue, decennial averages*

	Central government expenditure on (as a percentage of GDP)										Public debt					
	Capital			Education			Health		Military		Central government debt (as a percentage of GDP)			Public and publicly guaranteed debt service (as a percentage of central government current revenue)		
	1970s	1980s	1990s	1970s	1980s	1990s	1980s	1990s	1980s	1990s	1970s	1980s	1990s	1970s	1980s	1990s
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
WEI participants																
Argentina	m	[illegible]	[illegible]	m	m	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	m	[illegible]	m	[illegible]	[illegible]	[illegible]
Brazil	1 6	[illegible]	[illegible]	4 2	3 9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11 3	[illegible]	m	[illegible]	[illegible]	[illegible]
Chile	5 7	[illegible]	[illegible]	2 1	2 4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	m	67 [illegible]	22 7	[illegible]	[illegible]	[illegible]
China	m	[illegible]	[illegible]	5 0	5 1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	m	6 5	7 6	m	[illegible]	[illegible]
Egypt	10 1	[illegible]	[illegible]	2,7	3 2	[illegible]	1 8	[illegible]	[illegible]	[illegible]	m	m	m	[illegible]	[illegible]	[illegible]
India	1 4	[illegible]	[illegible]	2.2	1 2	[illegible]	0.9	[illegible]	[illegible]	[illegible]	35.4	45.9	51.2	6.3	[illegible]	18.9
Indonesia	8 0	9. [illegible]	[illegible]	6.2	5 3	[illegible]	0 6	0 [illegible]	[illegible]	[illegible]	25 3	37 0	41 9	12.1	[illegible]	32 2
Jamaica	8 2	5. [illegible]	[illegible]	5.3	5 3	7.3	2 6	2. [illegible]	[illegible]	[illegible]	82 8	128 9	86 5	21 3	[illegible]	30 2
Malaysia	5 0	6.6	[illegible]	1.5	1 4	3.3	1.5	1.[illegible]	[illegible]	[illegible]	42 1	77 3	m	10.2	[illegible]	16 5
Paraguay	2 5	1.7	[illegible]	3.1	3 0	3.2	0.7	1.5	[illegible]	[illegible]	m	12 1	12 5	13.2	[illegible]	41 8
Peru	3 8	2.9	[illegible]	1 9	2 1	3.0	1.3	2.6	[illegible]	[illegible]	m	190 1	55 5	28.7	[illegible]	20 1
Philippines	2 3	2.5	2.6	m	m	3.6	1.5	1.4	[illegible]	[illegible]	14 9	37 7	58 8	14 1	[illegible]	33 2
Thailand	3 8	3 3	6.5	5 1	5 5	6 5	0,9	1 4	[illegible]	[illegible]	19 3	27 0	10 6	5 4	20.8	11 9
Tunisia	8 7	9.7	6.8	2 2	2 8	2 6	3 0	2.2	[illegible]	[illegible]	35 2	47 4	59 3	12 2	25.9	25 7
Uruguay	2 0	1.8	1.7	4 0	6 6	7.8	2,0	2.4	[illegible]	[illegible]	16 4	30 5	23 7	21 2	25.2	13.7
Zimbabwe	1 7	2.4	3.1	m	m	m	3.2	2.6	4.6	3.6	36 8	45 8	60.9	1 6	17.5	24.0
WEI mean	***4.6***	***4.0***	***3.7***	***3.5***	***3.7***	***4.0***	***2.0***	***2.0***	***2.5***	***2.1***	***32.0***	***52.8***	***40.9***	***12.8***	***23.2***	***22.0***

Note Data presented in this table are based on the IMF concept of government expenditure which is limited to expenditure by the central government and thus excludes expenditure by state and local authorities Still, the IMF concept is broader than a 'national accounts' definition because it includes government transfer payments and gross capital formation At the same time, the data are not comparable with OECD/UNESCO data on public education expenditure which are based on an even broader concept of public spending and include expenditure by local and regional levels of government net of intergovernmental transfers Data on government expenditure by destination can, however, provide an indication of countries' budgetary priorities over time

Government expenditure by destination breaks down central government expenditure according to several functions

- *Capital expenditure* includes capital grants and central government spending to acquire fixed capital assets, land, intangible assets, government stocks and non military non financial assets
- *Public health expenditure* consists of recurrent and capital spending from the central government budget and social (or compulsory) health insurance funds
- *Public expenditure on education* comprises public spending on public education and subsidies to private education at the primary, secondary and tertiary levels of education Pre primary education is not included. Data for some countries refer to spending by the ministry of education only (excluding education expenditures by other ministries and departments, local authorities and so on). Thus, these data can provide an indication of countries' budgetary emphasis on education, but cannot be compared with other public education expenditure data presented in Tables 9–18
- *Military expenditure* generally covers expenditure of the ministry of defense with the exception of expenditure on public order and safety
- *Central government debt* consists of the gross amount of government liabilities to domestic and foreign creditors It is not reduced by the amount of government claims against others The present value of debt provides a measure of future debt service obligations that can be compared with the current value of indicators such as gross domestic product
- *Public and publicly guaranteed debt service* is the sum of principal repayments and interest actually paid on long term obligations of public debtors and long term private obligations guaranteed by a public entity Public and publicly guaranteed debt service is compared with the size of the central government budget to assess the burden of debt obligation on the government budget.

* Decennial averages are calculated on the basis of available data for the 1971–1980, 1981–1990 and 1991–2000 decades Data are presented only for countries included in the WEI growth study (see Chapter 1)

Source: World Bank, *World Development Indicators*, 2002

Table 20

School expectancy (2000)

Expected years of schooling for a 5-year-old under current conditions, excluding education for children under 5

	All levels of education			Primary and lower secondary	Upper secondary	Post-secondary non-tertiary	Tertiary	Full-time All levels of education	Part-time All levels of education
	All students	Male	Female	Male and female				Male and female	
	1	2	3	4	5	6	7	8	9
WEI participants									
Argentina[1]	16.1	m	m	10.0	4.1	a	1.9	16.0	8
Brazil[1]	15.1	m	m	10.0	3.6	a	1.0	m	m
Chile[1]	14.5	m	m	8.4	5.5	a	1.7	14.5	n
China	10.3	m	m	8.5	1.8	0.1	0.0	m	m
Egypt[3]	10.0	10.3	9.8	7.6	1.9	a	m	9.8	0.2
Indonesia[4]	9.5	m	m	7.8	0.1	a	0.0	7.8	2.1
Jamaica	14.1	m	m	9.5	1.6	0.8	0.7	9.5	5.2
Jordan	11.9	11.7	12.0	9.6	1.4	a	0.8	m	m
Malaysia[1]	12.6	m	m	8.9	1.8	0.2	1.1	12.6	0.1
Paraguay[1]	11.1	11.8	11.9	9.7	1.4	a	0.0	11.8	n
Peru[1, 5]	13.1	13.4	13.2	10.2	1.4	m	0.7	11.7	n
Philippines[1]	11.0	m	m	9.6	0.7	0.2	0.8	11.0	n
Russian Federation[2, 4]	10.0	m	m	x(1)	x(1)	0.7	0.1	10.5	n
Thailand[6]	13.1	13.0	13.1	9.5	2.2	n	1.5	m	m
Tunisia	13.7	m	m	10.0	2.1	n	0.9	13.2	n
Uruguay[1]	15.4	m	m	9.9	2.4	a	1.8	9.9	5.5
Zimbabwe[1]	12.0	12.4	11.6	9.2	1.3	n	0.1	11.9	n
WEI mean	***13.0***	***12.1***	***11.9***	***9.3***	***1.8***	***0.1***	***1.2***	***11.6***	***1.4***
OECD countries									
Australia*	20.7	20.1	20.1	11.8	4.7	0.6	3.0	14.6	6.2
Austria*	15.9	15.9	15.9	8.2	3.8	0.5	2.4	15.7	0.2
Belgium*	18.7	18.3	19.2	9.1	5.4	0.4	2.7	16.2	2.6
Canada	16.5	16.2	16.8	8.8	3.1	0.8	2.8	15.5	0.9
Czech Republic	15.6	15.5	15.6	9.1	3.1	0.3	1.5	15.4	0.2
Denmark	17.8	17.4	18.3	9.7	3.5	n	2.6	17.8	n
Finland*	18.7	18.1	19.4	9.1	4.4	0.1	4.1	18.7	n
France	16.5	16.3	16.7	9.4	3.3	n	2.6	16.5	n
Germany*	17.2	17.3	17.0	10.1	3.0	0.5	2.0	17.1	0.1
Greece	16.1	15.9	16.3	9.2	2.8	0.5	2.8	15.9	0.2
Hungary*	16.4	16.2	16.6	8.2	3.8	0.6	2.0	14.9	1.5
Iceland	18.0	17.3	18.6	9.9	4.7	0.1	2.3	16.0	1.9
Ireland*	15.9	15.5	16.4	10.8	2.3	0.6	2.3	15.3	0.6
Italy*	15.8	15.6	15.9	8.2	4.3	0.1	2.3	15.8	n
Japan	m	m	m	9.2	3.0	m	m	m	m
Korea	16.0	16.9	15.5	8.9	2.9	a	3.7	16.0	n
Luxembourg	m	m	m	9.2	3.6	0.1	m	m	m
Mexico	12.6	12.7	12.6	9.4	1.4	a	1.0	12.6	n
Netherlands	17.2	17.4	17.0	10.5	3.3	0.1	2.4	16.5	0.7
New Zealand	17.3	16.6	18.1	10.1	3.8	0.3	3.1	15.4	2.0
Norway	17.9	17.3	18.6	9.9	3.9	0.1	3.2	16.6	1.3
Poland	16.3	15.9	16.8	8.0	4.1	0.3	2.6	14.4	1.9
Portugal	17.0	16.7	17.4	10.8	3.0	n	2.4	13.9	3.1
Slovak Republic	m	m	m	m	m	0.1	1.5	m	m
Spain*	17.5	17.1	17.9	11.0	2.2	0.3	3.0	16.8	0.6
Sweden	20.2	18.6	22.0	9.8	5.4	0.1	3.1	16.1	4.1
Switzerland	16.4	16.7	16.0	9.6	3.3	0.2	1.7	16.0	0.4
Turkey*	10.1	11.6	8.8	7.5	1.7	a	0.8	10.1	n
United Kingdom	18.9	17.9	19.8	8.9	7.4	x(5)	2.5	14.6	4.3
United States	16.7	16.2	17.1	9.4	2.6	0.4	3.4	15.0	1.7
OECD mean	***16.8***	***16.6***	***17.1***	***9.4***	***3.6***	***0.2***	***2.5***	***15.5***	***1.2***

Note. See Annex 2 for notes on the calculation of school expectancy.

1. Year of reference 1999.

2. Improved data reporting for pre-primary (Russian Federation, Zimbabwe) and upper secondary (Argentina) is reflected in higher levels of expectancy compared to past years.

3. Excludes advanced research programmes.

4. Year of reference 2001.

5. Excludes tertiary, Type A and advanced research programmes.

6. Includes full time participation only. Participation by adults in part time accounts for about five more years of school expectancy.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI.

Table 21

Enrolment rates (2000)

Full-time and part-time students in public and private institutions as a percentage of the population in that age group

	Age of last year of compulsory education	Number of years at which over 90% of the population are enrolled	Age range at which over 90% of the population is enrolled	Enrolment rates: Ages 3-4	Ages 5-14	Ages 15-19	Ages 20-29	Ages 30-39	Age 40+
	1	2	3	4	5	6	7	8	9
WEI participants									
Argentina	14	10	5–14	47.4	102.8	68.7	20.8	4.8	1.2
Brazil[1]	14	8	7–14	54.6	90.1	58.7	20.7	5.9	1.5
Chile[2]	13	9	6–14	53.6	92.7	66.7	m	m	m
China[3]	15	9	7–11	m	79.6	m	m	n	m
Egypt[4]	15	6	6–11	6.4	83.5	11.4	m	n	m
India[1]	15	m	m	m	m	m	m	m	m
Indonesia[5]	15	6	8–11	n	76.5	18.7	5.1	n	m
Jamaica[1]	12	9	6–14	n	88.6	19.4	m	n	m
Jordan[1]	15	m	m	13.7	83.6	m	m	m	m
Malaysia[1, 6]	6	7	6–12	8.1	97.3	46.5	6.3	0.5	0.1
Paraguay[1,7]	14	6	7–11	6.3	86.6	46.6	m	m	m
Peru[1]	16	9	6–14	48.4	98.0	57.3	17.7	2.3	0.5
Philippines[1]	12	8	m	16.0	84.3	m	m	n	m
Russian Federation[2,3]	15	9	8–15	m	82.5	70.8	13.4	m	m
Thailand	15	9	4–13	61.5	97.4	60.2	m	m	m
Tunisia[1]	16	6	6–11	19.1	87.4	52.5	m	n	m
Uruguay[1]	14	9	6–14	23.5	97.8	60.7	18.1	3.6	0.5
Zimbabwe[1]	12	7	7–13	m	89.2	m	m	m	m
WEI mean	***14***	***9***	~	***32.2***	***88.9***	***54.5***	***14.4***	***1.6***	***0.4***
OECD countries									
Australia	15	12	5–16	34.2	100.0	81.8	28.2	14.9	7.1
Austria	15	11	6–16	60.6	98.2	76.4	17.9	3.1	x(8)
Belgium*	18	15	3–17	118.7	99.1	90.5	25.2	8.4	1.4
Canada	16	12	6–17	20.1	97.1	74.2	21.7	4.6	1.2
Czech Republic	15	12	5–16	70.6	99.8	80.8	14.2	1.1	n
Denmark	16	13	4–16	81.4	99.2	80.4	29.9	5.6	0.9
Finland	16	11	7–17	38.0	91.6	84.8	37.9	9.7	1.8
France*	16	15	3–17	117.7	99.8	86.4	19.1	1.7	x(8)
Germany	18	12	6–17	67.9	99.4	88.3	23.6	2.8	0.2
Greece	14.5	12	6–19	28.9	99.8	87.4	16.9	0.1	n
Hungary	16	12	5–16	79.2	99.9	81.1	18.7	4.2	0.1
Iceland*	16	13	4–16	123.9	98.5	78.9	30.5	6.5	1.8
Ireland	15	12	5–16	26.9	100.5	79.8	15.6	3.4	x(8)
Italy	14	12	3–14	97.5	99.7	65.5	18.7	2.3	0.1
Japan	15	14	4–17	77.4	101.2	m	m	m	m
Korea	14	12	6–17	17.5	92.3	78.6	23.9	1.4	0.3
Luxembourg	15	12	4–15	65.8	95.3	73.7	4.6	0.4	n
Mexico	15	7	6–12	35.5	94.8	41.0	9.1	2.8	0.7
Netherlands	18	14	4–17	49.9	99.4	86.6	22.9	3.0	0.6
New Zealand	16	13	4–16	86.8	99.0	72.4	21.4	9.0	3.1
Norway	16	12	6–17	74.5	97.4	85.5	27.5	6.1	1.3
Poland	15	11	6–16	29.2	93.6	84.2	24.4	3.0	m
Portugal	14	10	6–15	63.9	105.2	80.3	19.9	3.0	0.5
Slovak Republic	15	m	m	m	m	m	m	m	m
Spain*	16	13	4–16	98.1	104.4	79.5	24.3	2.7	0.4
Sweden*	16	13	6–18	70.5	97.8	86.4	33.4	15.0	3.4
Switzerland	15	11	6–16	20.8	98.8	83.5	18.9	3.3	0.1
Turkey*	14	5	7–11	n	80.2	28.4	5.2	0.2	n
United Kingdom*	16	12	4–15	81.1	98.9	73.3	23.8	13.2	5.4
United States	17	10	6–15	49.9	99.3	73.9	21.2	5.4	1.5
OECD mean	***16***	***12***	~	***63.8***	***97.9***	***77.3***	***21.4***	***4.9***	***1.3***

Note In WEI countries pre-primary education at age 5 is not compulsory and primary education starts at age 6 or 7. Therefore, the enrolment rate of the population aged 5–14 is not comparable with national statistics on enrolment rates in compulsory education. Similarly, enrolment rates for ages 15–19 and 20–29 may differ from national estimates on enrolment rates in upper secondary and tertiary education.

1. Year of reference 1999.
2. Excludes tertiary education.
3. Excludes pre-primary education.
4. Excludes post-secondary and tertiary education.
5. Year of reference 2001.
6. Education is not compulsory in Malaysia. Starting in 2003, education will be compulsory to age 12.
7. Excludes advanced research programmes.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI

Table 22

Transition characteristics at ages 15, 16, 17, 18, 19 and 20 (2000)

Net enrolment rates by level of education in public and private institutions, based on head counts

		Age 15	Age 16			Age 17			Age 18			Age 19			Age 20		
	Typical graduation age at upper secondary level	Second.	Second.	Post-secondary non-tertiary	Tert.	Second.	Post-secondary non-tertiary	Tert.	Second.	Post-secondary non-tertiary	Tert.	Second.	Post-secondary non-tertiary	Tert.	Second	Post secondary non tertiary	Tert
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
WEI participants																	
Argentina	16	71	71	..	0	63	a	a	32	a	15	17	a	14	0	a	7
Brazil[1]	17 18	74	73	a	a	75	a	a	31	a	3	44	a	7	20	a	8
Chile[1]	18	88	87	..	0	81	1	a	53	2	a	27	3	a	8	1	a
China	18	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Egypt	17	66	57	m	m	30	m	m	m	m	m	n	m	m	0	m	m
Indonesia[2]	18	42	39	a	a	42	a	a	25	2	17	9	a	19	3	a	17
Jamaica	16	80	83	3	m	32	4	m	7	3	a	1	a	m	a	a	m
Jordan	17	78	69	a	m	56	a	m	13	2	a	3	a	m	a	a	a
Malaysia[1]	17	83	70	a	a	14	1	a	11	7	35	1	5	18	a	3	1
Paraguay[1]	17	56	51	a	a	44	a	a	30	a	8	26	a	3	13	a	1
Peru[3]	m	71	67	m	m	39	m	m	21	m	m	11	m	m	6	m	m
Philippines	17	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Russian Federation[1]	18	m	m	17	m	m	19	m	m	11	m	m	4	m	m	1	m
Thailand	17	73	63	a	a	52	a	m	34	m	m	6	m	m	a	a	m
Tunisia	18 19	72	63	a	a	52	a	a	42	a	a	31	m	m	22	m	m
Uruguay[1]	17	78	71	a	a	63	a	a	43	a	7	25	a	14	17	a	16
Zimbabwe	19	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
WEI mean	***17***	***72***	***65***	***2***	***a***	***50***	***2***	***a***	***29***	***2***	***9***	***15***	***1***	***12***	***9***	***a***	***12***
OECD countries																	
Australia	19	99	94	a	a	79	1	5	38	3	29	25	3	34	20	2	33
Austria	17 19	95	91	a	a	78	11	a	43	19	6	16	11	14	5	4	19
Belgium	18-19	100	99	a	a	96	a	1	44	6	36	22	6	45	12	4	46
Canada	18	98	93	a	a	93	6	4	1	10	19	2	10	36	2	7	37
Czech Republic	18 19	100	100	a	a	98	a	a	54	4	12	15	4	22	4	2	23
Denmark	19-20	96	91	a	a	82	a	a	76	a	a	56	a	3	34	a	11
Finland	19	99	95	a	a	94	a	a	87	a	1	30	a	17	17	a	31
France	18 20	97	96	a	a	89	a	2	56	a	25	29	a	38	12	a	42
Germany	19	98	97	a	a	92	a	1	83	a	3	41	18	8	20	14	15
Greece	18	93	94	a	a	66	a	a	13	4	77	16	8	68	a	8	56
Hungary	16 18	97	95	a	a	83	2	a	55	11	12	18	16	23	8	11	26
Iceland	20	99	90	a	a	76	a	a	68	a	a	62	a	1	33	a	14
Ireland	17 18	97	91	a	a	72	4	5	27	13	32	3	10	38	1	6	35
Italy	17 19	89	83	a	a	73	a	a	63	a	a	18	a	4	6	1	26
Japan	18	100	96	a	a	92	a	a	m	m	m	m	m	m	m	m	m
Korea	17 18	91	96	a	a	93	a	2	13	a	43	2	a	58	a	a	57
Luxembourg	18 19	91	87	a	m	80	a	m	70	a	m	40	a	m	23	a	m
Mexico	18	52	44	a	a	33	a	3	16	a	12	24	a	14	4	a	14
Netherlands	18 19	103	107	a	a	89	a	5	61	a	17	26	a	27	23	1	32
New Zealand	18	94	90	1	1	70	2	3	28	3	25	12	3	31	9	2	33
Norway	19	100	94	a	a	92	a	a	86	a	a	41	1	13	18	1	28
Poland	18 20	90	92	a	a	89	a	x	76	a	1	29	6	27	14	8	33
Portugal	18	98	87	a	a	85	a	3	54	a	16	28	a	26	17	a	30
Slovak Republic	m	m	m	a	a	m	a	a	m	1	14	m	2	21	m	1	21
Spain	16 18	100	90	1	a	78	2	a	38	5	27	21	5	35	13	5	38
Sweden	19	98	89	a	a	91	a	a	91	a	a	28	2	12	21	2	23
Switzerland	18-20	97	90	a	a	85	a	a	78	1	1	53	3	6	23	4	14
Turkey	17	42	39	a	a	20	a	3	6	a	9	4	a	13	a	a	13
United Kingdom	16 18	103	84	x	a	71	x	2	32	x	24	18	x	33	13	x	33
United States	18	91	87	a	a	79	a	2	24	3	35	6	3	41	2	3	38
OECD mean	***18***	***93***	***89***	***a***	***a***	***80***	***1***	***1***	***49***	***3***	***17***	***24***	***4***	***25***	***13***	***3***	***29***

1. Year of reference 1999
2. Year of reference 2001.

Source, OECD/UNESCO WEI.

Table 23

Distribution of students by type of institution and mode of enrolment (2000)

Percentage of students in public and private institutions and full-time and part-time programmes in primary and secondary education

	Type of institution									Mode of enrolment	
	Primary			Lower secondary			Upper secondary			Primary and secondary	
	Public	Government dependent private	Independent private	Public	Government dependent private	Independent private	Public	Government dependent private	Independent private	Full-time	Part-time
	1	2	3	4	5	6	7	8	9	10	11
WEI participants											
Argentina[1]	80.5	19.5	x(3)	77.5	22.5	x(5)	72.2	27.8	x(8)	100.0	a
Brazil[4]	91.9	a	8.1	89.9	a	10.1	83.2	a	16.8	100.0	a
Chile[1]	56.8	35.7	7.5	57.8	34.1	8.1	51.4	32.4	16.1	100.0	a
China	m	m	m	m	m	m	m	m	m	96.7	3.3
Egypt	92.4	1.1	6.5	95.8	1.2	3.0	93.8	0.2	6.2	100.0	a
India[1]	80.8	10.6	8.6	58.0	30.9	11.1	44.4	46.5	9.1	95.3	4.7
Indonesia[2]	92.7	a	7.3	72.1	a	27.9	47.2	a	52.8	100.0	a
Jamaica[3]	96.0	a	4.0	97.0	a	3.0	97.0	a	3.0	100.0	a
Jordan[4]	70.0	a	30.0	80.5	a	19.5	91.3	a	8.7	100.0	a
Malaysia[1]	94.3	a	5.7	92.6	a	7.4	92.1	a	7.9	100.0	a
Paraguay[1]	85.0	9.3	5.7	72.5	10.9	16.7	67.4	7.4	25.2	100.0	a
Peru[1]	87.4	3.2	9.4	84.9	4.7	10.4	82.2	5.1	12.7	100.0	a
Philippines[1]	92.5	a	7.5	74.8	a	25.2	69.5	a	30.5	100.0	a
Russian Federation[2, 3]	99.6	a	0.4	99.7	a	0.3	99.6	a	0.4	m	m
Thailand	86.9	13.1	n	93.6	6.4	n	87.7	3.0	9.3	m	m
Tunisia	99.3	a	0.7	94.5	a	5.5	88.8	a	11.2	100.0	a
Uruguay[1]	85.8	a	14.2	86.1	a	13.9	88.3	a	11.7	100.0	a
Zimbabwe	12.0	88.0	a	27.6	72.4	a	42.6	57.4	a	100.0	a
WEI mean	***82.6***	***10.6***	***6.8***	***79.7***	***10.8***	***9.5***	***76.4***	***10.6***	***13.0***	***99.5***	***0.5***
OECD countries											
Australia	72.8	27.2	a	69.1	30.9	a	82.9	17.1	a	74.0	26.0
Austria	95.8	4.2	x(2)	92.6	7.4	x(5)	90.6	9.4	x(9)	99.4	0.6
Belgium	45.6	54.4	n	41.9	58.1	n	39.9	60.1	n	84.1	15.9
Canada	93.5	1.4	5.1	92.1	1.1	6.7	94.4	0.7	4.9	99.2	0.8
Czech Republic	99.1	0.9	a	98.3	1.7	a	89.5	10.5	a	99.7	0.3
Denmark	89.2	10.8	a	78.4	21.6	a	98.0	2.0	a	100.0	a
Finland	98.9	1.1	a	96.0	4.0	a	89.8	10.2	a	100.0	a
France	85.4	14.3	0.2	79.2	19.8	1.0	69.7	16.6	13.7	100.0	a
Germany	97.8	2.2	x(2)	93.3	6.7	x(5)	93.2	6.8	x(9)	99.8	0.2
Greece	93.0	a	7.0	95.0	a	5.0	93.9	a	6.1	98.3	1.7
Hungary	94.9	5.1	a	95.0	5.0	a	90.6	9.4	a	97.0	3.0
Iceland	98.6	1.4	n	99.0	1.0	n	94.2	5.8	n	92.9	7.1
Ireland	98.8	n	1.2	100.0	n	n	98.8	n	1.2	99.9	0.1
Italy	93.4	a	6.6	96.5	a	3.5	93.7	0.9	5.4	100.0	a
Japan	99.1	a	0.9	94.4	a	5.6	69.4	a	30.6	99.0	1.0
Korea	98.5	a	1.5	77.6	22.4	a	45.0	55.0	a	100.0	a
Luxembourg	93.2	1.0	5.8	79.0	14.0	7.0	85.0	7.7	7.4	100.0	n
Mexico	92.6	a	7.4	86.6	a	13.4	78.6	a	21.4	100.0	a
Netherlands	31.4	68.6	a	24.6	75.3	0.2	7.8	90.0	2.2	97.6	2.4
New Zealand	98.0	a	2.0	95.9	a	4.1	83.0	7.9	9.1	95.2	4.8
Norway	98.5	1.5	x(2)	98.1	1.9	x(5)	89.1	10.9	x(9)	98.6	1.4
Poland	99.2	0.8	a	99.0	1.0	a	93.9	6.1	0.1	95.5	4.5
Portugal	90.4	a	9.6	90.1	a	9.9	85.0	a	15.0	93.5	6.5
Slovak Republic	96.1	3.9	n	95.2	4.8	n	93.3	6.7	n	98.8	1.2
Spain	66.6	30.2	3.2	67.1	29.8	3.2	78.9	10.0	11.1	96.2	3.8
Sweden	96.6	3.4	a	97.3	2.7	a	98.0	2.0	a	84.8	15.2
Switzerland	96.7	1.2	2.2	93.2	2.5	4.3	91.4	3.6	5.0	99.7	0.3
Turkey	98.2	a	1.8	a	a	a	97.5	a	2.5	100.0	a
United Kingdom	95.3	a	4.7	93.6	0.3	6.1	29.6	67.4	3.0	77.0	23.0
United States	88.4	a	11.6	90.1	a	9.9	90.6	a	9.4	100.0	n
OECD mean	***89.9***	***7.8***	***2.7***	***83.6***	***10.4***	***3.1***	***81.2***	***13.9***	***5.7***	***96.0***	***4.0***

1 Year of reference 1999.
2 Year of reference 2001.
3 Includes ISCED 3 general programmes only.
4 Institutions run by the United Nations Relief and Works Agency (UNRWA) for Palestinian Refugees in the Near East are counted as independent private institutions and account for about half of students enrolled.
Source. OECD/UNESCO WEI

Table 24

Gross entry rates to secondary education (2000)

New entrants as a percentage of total population at typical age of entry, by level of education and gender

	Lower secondary			Upper secondary		
	Male and female	Male	Female	Male and female	Male	Female
	1	2	3	4	5	6
WEI participants						
Argentina[1]	124	119	129	85	78	92
Chile	93	93	93	83	82	83
China	89	89	89	42	m	m
India[2]	73	80	64	43	48	38
Indonesia[3]	68	71	65	39	42	35
Jamaica	90	90	91	77	73	80
Jordan	85	85	86	73	71	75
Malaysia[1]	94	93	94	83	75	92
Paraguay[1]	82	83	81	48	47	49
Peru[1]	95	98	92	69	69	68
Philippines[1]	89	88	90	68	62	73
Russian Federation[3]	98	99	98	59	51	68
Thailand	85	83	88	63	60	66
Tunisia	125	117	132	53	52	55
Uruguay[1]	109	106	112	78	68	89
Zimbabwe	64	65	63	m	m	m
WEI mean	***89***	***89***	***89***	***64***	***63***	***69***

Note: A gross entry rate greater than 100% can be due to repetition of grades in primary school.

1. Year of reference 1999.
2. Year of reference 1998.
3. Year of reference 2001.

Source: OECD/UNESCO WEI.

Table 25

Distribution of upper secondary enrolment (2000)

Percentage of students by programme destination and programme orientation

	Programme destination			Programme orientation		
	ISCED 3A	ISCED 3B	ISCED 3C	General	Pre-vocational	Vocational
	1	2	3	4	5	6
WEI participants						
[illegible][1]	100.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brazil[1]	m	m	m	82.3	a	17.7
Chile[1]	58.2	41.8	a	58.2	a	41.8
China	47.0	a	53.0	47.0	x(6)	53.0
Egypt	35.2	64.8	m	35.2	a	64.8
India[1]	m	a	m	95.8	a	4.2
Indonesia[2]	60.3	39.7	m	m	a	m
Jamaica	99.1	0.9	m	99.1	a	0.9
Jordan	93.9	a	6.1	74.9	a	25.1
Malaysia[1]	14.9	a	85.1	84.9	a	15.1
Paraguay[1]	m	a	m	81.5	a	18.5
Peru[1, 3]	a	a	a	75.1	a	24.9
Philippines[1]	100.0	a	a	100.0	a	a
Thailand	70.0	30.0	a	70.0	a	30.0
Tunisia	94.1	3.7	2.2	94.1	3.7	2.2
Uruguay[1]	90.3	a	9.7	81.3	a	18.7
Zimbabwe	54.9	45.1	x(2)	m	m	m
WEI mean	***70.6***	***17.4***	***12.0***	***74.7***	***3.7***	***21.6***
OECD countries						
Australia	34.3	a	65.7	34.3	a	65.7
Austria	43.5	48.1	8.5	21.7	7.2	71.1
Belgium	53.7	a	46.3	33.2	a	66.8
Canada	90.9	a	9.1	90.9	9.1	a
Czech Republic	63.5	0.5	36.0	18.6	1.1	80.2
Denmark	45.3	a	54.7	45.1	0.2	54.7
Finland	100.0	a	a	44.7	a	55.3
France	67.0	a	33.0	42.6	a	57.4
Germany	36.8	63.2	a	36.8	a	63.2
Greece	67.9	a	32.1	67.9	a	32.1
Hungary	74.6	1.7	23.6	36.0	53.7	10.3
Iceland	66.8	0.5	32.7	66.6	1.1	32.3
Ireland	78.1	a	21.9	76.6	23.4	a
Italy	80.8	1.3	17.9	35.7	39.8	24.6
Japan	73.9	0.8	25.3	73.9	0.8	25.3
Korea	63.9	a	36.1	63.9	a	36.1
Luxembourg	61.2	14.4	24.3	36.5	a	63.5
Mexico	87.0	a	13.0	87.0	a	13.0
Netherlands	64.8	a	35.2	31.7	a	68.3
New Zealand	65.0	17.4	17.6	m	m	m
Norway	42.7	a	57.3	42.7	a	57.3
Poland	78.0	a	22.0	35.7	a	64.3
Portugal	75.9	17.0	7.0	72.2	a	27.8
Slovak Republic	78.1	a	21.9	21.4	a	78.6
Spain	66.5	n	33.5	66.5	n	33.5
Sweden	49.0	a	0.4	51.2	a	48.8
Switzerland	30.0	60.0	10.0	34.3	a	65.7
Turkey	90.1	a	9.9	51.0	a	49.0
United Kingdom	24.3	a	75.7	32.7	x(6)	67.3
OECD mean	***63.9***	***7.8***	***26.6***	***48.3***	***5.1***	***46.9***

1. Year of reference 1999
2. Year of reference 2001
3. There is no difference between ISCED 3A and 3B in the education system in Peru. Therefore, the distribution of enrolments is not relevant.

Source: OECD/UNESCO WEI.

Table 26

Upper secondary graduation rates (2000)

Upper secondary graduates as a percentage of the total population at typical age of graduation in public and private institutions, by programme destination, programme orientation and gender

	ISCED 3A (preparation for direct entry into tertiary, Type A education)		ISCED 3B (preparation for direct entry into tertiary, Type B education)		ISCED 3C (long) similar to duration of typical ISCED 3A or 3B programmes		ISCED 3C (short) shorter than duration of typical ISCED 3A or 3B programmes		General programmes		Pre-vocational/vocational programmes	
	Male and female	Female	Male and female	Female	Male and female	Female	Male and female	Female	Male and female	Female	Male and female	Female
	1	2	3	4	5	6	7	8	9	10	11	12
WEI participants												
Argentina[1]	48	55	a	a	a	a	a	a	26	34	11	21
Brazil[1]	62	70	m	m	m	m	a	a	m	m	m	m
China[1]	17	16	a	a	6	8	4	10	m	m	m	m
India	34	28	a	a	m	m	m	m	m	m	m	m
Indonesia[1]	19	20	13	11	8	9	a	a	19	20	11	11
Jamaica	65	67	n	n	2	1	a	a	65	67	n	n
Jordan	68	75	a	a	3	3	a	a	55	63	13	13
Malaysia[1]	14	19	a	a	11	11	a	a	6	8	2	1
Paraguay[1]	35	38	a	a	m	m	a	a	28	31	8	8
Peru[1]	50	50	x(1)	x(2)	4	4	a	a	41	42	9	8
Philippines[1]	66	72	a	a	3	4	a	a	66	72	a	a
Russian Federation[1]	53	m	a	a	m	m	m	m	m	m	m	m
Thailand	27	30	18	18	m	m	a	a	27	30	18	18
Tunisia	26	29	2	1	2	3	a	a	26	29	4	2
Zimbabwe	3	3	1	1	m	m	m	m	m	m	m	m
WEI mean	***39***	***41***	~	~	~	~	~	~	***42***	***47***	***9***	***8***
OECD countries												
Australia	67	73	m	m	m	m	m	m	m	m	m	m
Belgium	60	64	a	a	19	19	11	15	36	40	54	57
Czech Republic[3]	18	21	n	n	a	a	31	23	8	10	41	35
Denmark	52	64	a	a	54	64	a	a	52	64	54	64
Finland	87	94	a	a	a	a	a	a	53	64	72	77
France	49	57	10	8	2	2	37	32	31	37	67	62
Germany	33	36	58	57	a	a	a	a	33	36	58	57
Greece	56	64	m	m	26	22	m	m	56	64	26	22
Hungary	58	65	1	2	x(7)	x(8)	37	28	26	32	70	62
Iceland	47	58	n	n	22	14	14	16	47	58	36	30
Ireland	74	80	a	a	5	5	a	a	59	63	20	23
Italy	74	80	1	1	a	a	19	18	29	39	64	60
Japan	69	73	1	n	24	23	x(5)	x(6)	69	73	26	24
Korea	60	58	a	a	37	38	a	a	60	58	37	38
Luxembourg[3]	39	47	6	5	20	17	a	a	26	29	40	40
Mexico	28	30	a	a	4	5	x(5)	x(6)	28	30	4	5
Netherlands	63	68	a	a	32	29	x(5)	x(6)	37	41	57	56
New Zealand	65	70	45	52	12	14	x(5)	x(6)	m	m	m	m
Norway	64	79	a	a	52	44	m	m	64	79	52	44
Poland	70	78	a	a	a	a	29	21	32	41	67	58
Slovak Republic	72	80	n	n	1	1	24	17	18	21	79	77
Spain[3]	46	53	n	n	9	9	13	15	46	53	22	24
Sweden	74	77	a	a	1	n	a	a	42	46	32	31
Switzerland	19	22	50	42	13	19	n	n	m	m	m	m
Turkey	37	31	a	a	m	m	a	a	20	19	16	13
OECD mean	***55***	***61***	***8***	***7***	***15***	***15***	***12***	***10***	***40***	***45***	***45***	***44***

1. Year of reference 1999.
2. Year of reference 2001.
3. A significant proportion of the youth cohort is missing.

Source: OECD/UNESCO WEI.

Table 27

Entry rates to tertiary education (2000)

Sum of net entry rates for single years of age, by programme destination and gender

	Tertiary, Type B			Tertiary, Type A		
	Male and female	Male	Female	Male and female	Male	Female
	1	2	3	4	5	6
WEI participants						
Argentina[1]	[illegible]	18	[illegible]	[illegible]	[illegible]	[illegible]
Chile[1, 2]	11	14	[illegible]	38	[illegible]	[illegible]
China[1, 3]	[illegible]	(1)	[illegible]	8	x(4)	x(4)
Indonesia[3]	[illegible]	7	[illegible]	14	16	11
Jamaica	[illegible]	10	[illegible]	9	6	13
Jordan[3]	10	9	[illegible]	30	29	30
Malaysia[1]	[illegible]	24	[illegible]	22	19	25
Paraguay[1, 3]	[illegible]	5	[illegible]	m	m	m
Philippines[1]	[illegible]	a	[illegible]	41	36	45
Thailand[3]	[illegible]	[illegible]	[illegible]	40	36	44
Tunisia[3]	[illegible]	x(5)	[illegible]	27	27	27
Uruguay[1, 3]	[illegible]	8	[illegible]	26	21	31
Zimbabwe[3]	[illegible]	5	[illegible]	1	2	1
WEI mean	***14***	***[illegible]***	***17***	***26***	***24***	***[illegible]***
OECD countries						
Australia	m	m	m	59	52	66
Austria	m	m	m	33	30	37
Belgium (Fl.)	34	28	39	36	36	36
Czech Republic*	9	6	12	25	26	24
Denmark	35	26	45	29	27	32
Finland	a	a	a	71	62	81
France	21	22	21	37	30	44
Germany[4]	13	9	18	30	30	30
Hungary*	2	1	2	65	60	70
Iceland	10	11	9	66	48	84
Ireland	26	23	28	31	29	34
Italy[3]	1	1	1	43	38	49
Japan[3]	32	22	43	39	47	30
Korea[3]	50	51	49	45	48	41
Mexico	1	1	1	26	27	26
Netherlands	1	1	2	51	48	54
New Zealand	37	31	42	70	57	84
Norway	7	9	6	59	45	74
Poland[3]	1	n	2	62	x(4)	x(4)
Slovak Republic[4]	3	1	5	37	38	36
Spain	15	15	16	48	42	54
Sweden	7	7	6	67	54	81
Switzerland	14	15	13	29	32	26
Turkey*	9	11	8	21	26	17
United Kingdom	28	24	32	46	42	49
United States	14	12	15	43	37	49
OECD mean	***15***	***14***	***17***	***45***	***40***	***48***

1. Year of reference 1999.
2. Entry rate for Type A and B programmes is calculated as a gross entry rate.
3. Year of reference 2001.
4. Entry rate for Type B programmes is calculated as a gross entry rate
* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002)

Source: OECD/UNESCO WEI.

Table 28

Distribution of students by programme destination, type of institution and mode of study (2000)

Percentage of students in public and private institutions and full time and part time programmes in tertiary education

	Type of institution						Mode of study			
	Tertiary, Type B			Tertiary, Type A and advanced research programmes			Tertiary, Type B		Tertiary, Type A and advanced research programmes	
	Public	Government dependent private	Independent private	Public	Government dependent private	Independent private	Full time	Part time	Full time	Part time
	1	2	3	4	5	6	7	8	9	10
WEI participants										
Argentina[1]	m	m	m	85.2	a	14.8	m	m	m	m
Brazil[1]	m	a	m	36.9	a	63.1	m	m	100.0	a
Chile[1]	7.2	6.8	86.0	33.0	33.3	43.7	100.0	n	100.0	n
China	m	m	m	m	m	m	59.4	40.6	89.4	10.6
Egypt	m	m	m	m	m	m	68.9	31.1	m	m
Indonesia[2]	37.1	a	62.9	31.4	a	68.6	100.0	a	100.0	a
Jamaica	97.7	a	2.3	81.4	a	18.6	71.6	28.4	m	m
Jordan	44.7	a	55.3	69.2	a	30.8	100.0	a	100.0	a
Malaysia[1]	56.4	a	43.6	77.0	a	23.0	89.8	10.2	85.5	14.5
Paraguay[1]	51.7	1.7	46.5	m	a	m	100.0	a	m	m
Peru[1]	56.2	n	43.8	62.3	a	37.7	100.0	a	m	m
Philippines[1]	a	a	a	26.9	a	73.1	a	a	100.0	a
Russian Federation[2]	97.8	a	2.2	90.3	a	9.7	m	m	m	m
Thailand	56.7	a	43.3	88.3	a	11.7	100.0	a	m	m
Tunisia	m	m	m	m	m	m	100.0	a	100.0	a
Uruguay[1]	91.0	a	9.0	88.4	a	11.6	100.0	a	100.0	a
Zimbabwe	91.0	9.0	a	76.0	24.0	a	m	m	m	m
WEI mean	***59.9***	***1.5***	***38.6***	***65.1***	***3.6***	***31.3***	***90.8***	***9.2***	***97.2***	***2.8***
OECD countries										
Australia	98.9	1.1	a	100.0	a	a	32.3	67.7	62.1	37.9
Austria	64.4	35.6	n	95.8	4.2	n	66.1	33.9	100.0	a
Belgium	48.7	51.3	n	38.7	61.3	n	74.4	25.6	94.9	5.1
Canada	100.0	n	n	100.0	n	n	85.2	14.8	68.2	31.8
Czech Republic	66.3	33.7	a	100.0	a	a	100.0	n	92.4	7.6
Denmark	99.6	0.4	a	100.0	a	a	100.0	a	100.0	a
Finland	81.3	18.7	a	89.7	10.3	a	100.0	a	100.0	a
France	73.2	9.1	17.7	89.4	0.8	9.8	100.0	a	100.0	a
Germany	63.2	36.8	x(2)	100.0	a	a	84.9	15.1	100.0	a
Greece	100.0	a	a	100.0	a	a	100.0	a	100.0	a
Hungary	100.0	n	a	87.0	13.0	a	87.7	12.3	58.0	42.0
Iceland	43.8	56.2	n	95.4	4.6	n	71.2	28.8	80.9	19.1
Ireland	94.2	n	5.8	95.3	n	4.7	60.7	39.3	86.8	13.2
Italy	85.3	a	14.7	93.8	a	6.2	100.0	a	100.0	a
Japan	9.4	a	90.6	27.3	a	72.7	96.7	3.3	90.6	9.4
Korea	14.0	a	86.0	23.2	a	76.8	100.0	a	100.0	a
Luxembourg	100.0	a	a	100.0	a	a	99.3	0.7	100.0	a
Mexico	100.0	a	a	69.0	a	31.0	100.0	a	100.0	a
Netherlands	8.9	91.1	m	31.3	68.7	m	69.3	30.7	82.6	17.4
New Zealand	81.3	18.2	0.5	99.0	1.0	n	45.0	55.0	69.7	30.3
Norway	74.9	25.1	x(2)	88.6	11.4	x(5)	87.2	12.8	72.8	27.2
Poland	89.0	10.2	0.7	72.2	a	27.8	78.0	22.0	53.9	46.1
Portugal	80.0	a	20.0	64.3	a	35.7	m	m	m	m
Slovak Republic	94.9	5.1	n	100.0	n	n	64.8	35.2	71.9	28.1
Spain	77.3	16.3	6.3	88.7	n	11.3	99.6	0.4	91.5	8.5
Sweden	71.4	1.6	27.0	94.6	5.4	a	93.0	7.0	54.0	46.0
Switzerland	37.7	39.2	23.1	92.4	6.1	1.5	32.9	67.1	94.5	5.5
Turkey	97.6	a	2.4	95.7	a	4.3	100.0	a	100.0	a
United Kingdom	a	100.0	n	a	100.0	n	30.5	69.5	76.0	24.0
United States	92.5	a	7.5	68.7	a	31.3	44.2	55.8	64.7	35.3
OECD mean	***71.6***	***18.3***	***10.1***	***80.0***	***9.6***	***10.4***	***79.4***	***20.6***	***85.0***	***15.0***

1. Year of reference 1999.
2. Year of reference 2001.

Source: OECD/UNESCO WEI

Table 29

Graduation rates in tertiary education (2000)

Sum of graduation rates by single year of age (multiplied by 100), by type and length of programme

	Tertiary, Type B programmes	Tertiary, Type A programmes					Advanced research programmes
	All first degree programmes	Medium first-degree programmes (3 to <5 years)	Long first-degree programmes (5-6 years)	Very long first-degree programmes (>6 years)	Short second-degree programmes (<6 years)	Long second-degree programmes (6+ years)	Doctor of Philosophy (Ph.D.) or equivalent
	1	2	3	4	5	6	7
WEI participants[1]							
Argentina	13.7	m	[illegible]	[illegible]	1.8	[illegible]	0.2
Brazil[2]	[illegible]	16.3	x	x	x	x	0.7
Chile[2]	[illegible]	[illegible]	11.1	[illegible]	1.5	0	0.8
China	[illegible]	[illegible]	n	[illegible]	0.2	0	n
Indonesia[3]	[illegible]	[illegible]	1.4	[illegible]	m	m	0.2
Jamaica	[illegible]	5.7	a	[illegible]	a	a	x
Jordan	[illegible]	14.6	4.1	[illegible]	2.1	0	0.1
Malaysia[2]	[illegible]	10.4	0.1	[illegible]	1.5	0	n
Paraguay[2]	[illegible]	5.3	x	x	0.2	0	m
Philippines[2, 4]	[illegible]	25.5	x	x	x	0	x
Russian Federation[3]	[illegible]	2.3	24.6	[illegible]	a	a	1.5
Thailand	[illegible]	13.9	x	[illegible]	n	0	1.7
Tunisia	[illegible]	7.0	a	[illegible]	1.0	0	m
Uruguay[2]	[illegible]	1.7	2.5	[illegible]	0.2	a	1.5
Zimbabwe	[illegible]	m	a	[illegible]	m	0	m
WEI mean	***8.6***	***8.6***	***3.4***	***0.5***	***0.7***	–	***0.6***
OECD countries							
Australia	1.0	29.1	7.1	n	11.0	n	1.3
Austria	m	1.6	11.7	n	n	0.1	1.4
Belgium[1]	28.7	x	17.8	x	a	6.5	0.8
Canada	16.4	27.2	1.4	1.1	5.0	n	0.8
Czech Republic	4.8	5.9	8.7	a	1.9	a	0.6
Denmark	22.6	9.2	a	a	9.4	0.6	1.1
Finland	15.4	20.4	18.4	a	a	0.8	1.9
France[1]	18.3	30.6	5.7	0.9	10.5	a	1.2
Germany	10.7	5.3	11.5	a	a	a	2.0
Hungary	0.4	19.1	10.3	a	8.5	x	0.6
Iceland	5.7	31.6	2.9	n	2.4	n	n
Ireland[1]	15.2	29.5	1.2	x	12.0	x	0.8
Italy[1]	0.6	0.9	15.5	a	2.6	1.2	0.4
Japan[1]	28.8	30.9	x	a	2.7	a	0.7
Korea[1]	30.8	27.5	0.6	a	3.5	a	0.7
Mexico	0.6	13.7	x	x	m	m	m
Netherlands	1.0	32.7	1.4	a	2.1	a	m
New Zealand	16.4	31.8	6.6	0.7	17.7	n	0.8
Norway	6.4	29.4	3.7	3.2	2.1	2.5	1.0
Poland[1]	0.9	19.7	14.6	a	23.1	a	m
Portugal	3.5	31.7	x	x	x	x	1.0
Slovak Republic[1]	2.2	5.5	15.8	n	n	n	0.5
Spain	7.5	12.6	15.8	n	x	m	0.5
Sweden	3.9	27.8	1.3	a	0.6	a	2.5
Switzerland[1]	20.6	8.8	12.0	1.0	4.2	1.5	2.6
Turkey	4.5	9.3	x	a	0.9	a	0.2
United Kingdom	13.3	33.6	2.2	0.1	13.5	x	1.3
United States[1]	8.3	33.2	a	a	13.3	2.3	1.3
OECD mean	***10.7***	***20.7***	***5.8***	***0.3***	***4.8***	***0.7***	***1.0***

1. Gross graduation rate, calculated as the ratio of graduates to total population at typical age of graduation (multiplied by 100)
2. Year of reference 1999
3. Year of reference 2001.
4. All tertiary programmes are included in first degree level of 3–5 years in duration

Note Short tertiary, Type A degrees of less than three years in duration are excluded from this indicator

Source OECD/UNESCO WEI

Table 30

Percentage of tertiary qualifications awarded to females (2000)

By type of tertiary education

	Tertiary, Type B (first degree)	Tertiary, Type B (second degree)	Tertiary, Type A (first degree)	Tertiary, Type A (second degree)	Advanced research degrees
	1	2	3	4	5
WEI participants					
Argentina	70	77	m	m	m
Brazil[1]	x(3)	x(3)	61	x(4)	54
Chile[1]	48	a	53	33	m
China[1]	m	a	m	38	m
India[1]	25	a	40	40	m
Indonesia[2]	28	m	42	m	38
Jamaica[3]	68	m	74	66	x(4)
Jordan	72	a	47	36	17
Malaysia[1]	49	66	57	38	30
Paraguay[1]	76	85	63	68	m
Russian Federation[1]	m	a	m	a	40
Thailand	53	n	57	n	49
Tunisia	46	a	49	37	m
Uruguay[1]	77	83	56	83	55
Zimbabwe	51	a	m	m	m
WEI mean	55	**62**	54	***45***	44
OECD countries					
Australia	m	m	57	56	40
Austria	48	79	48	32	36
Belgium	61	m	50	53	34
Canada	57	n	59	52	39
Czech Republic	72	a	51	53	29
Denmark	66	75	51	49	38
Finland	65	a	59	59	45
France	54	a	57	56	41
Germany	62	a	46	a	34
Hungary	69	m	60	35	38
Iceland	48	a	67	59	50
Ireland	52	52	55	60	47
Italy	64	a	56	56	53
Japan	68	a	37	23	19
Korea	54	34	47	30	20
Mexico	40	m	52	m	36
Netherlands	56	a	54	66	m
New Zealand	65	66	64	54	43
Norway	47	a	64	52	33
Poland	83	a	m	68	m
Portugal	70	m	65	x(3)	49
Slovak Republic	81	a	52	a	38
Spain	52	a	59	m	44
Sweden	53	a	60	93	37
Switzerland	44	42	42	26	31
Turkey	43	a	41	39	37
United Kingdom	59	x(1)	54	54	38
United States	60	a	57	56	44
OECD mean	**59**	***44***	***54***	***51***	***38***

1. Year of reference 1999.
2. Year of reference 2001.
3. Only public institutions are included

Source. OECD/UNESCO WEI.

Table 31

Ratio of students to teaching staff and estimated class size (2000)

By level of education, calculations based on full-time equivalents

	Student-teacher ratio in public and private institutions									Estimated class size in public institutions	
	Pre-primary	Primary	Lower secondary	Upper secondary	All secondary	Post-secondary non-tertiary	Tertiary, Type B	Tertiary, Type A and advanced research programmes	All tertiary	Primary education	Lower secondary education
	1	2	3	4	5	6	7	8	9	10	11
WEI Participants											
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brazil[2]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	x(9)	[illegible]	[illegible]	[illegible]
Chile[2]	m	[illegible]	33.4	28.5	30.2	m	m	m	m	[illegible]	[illegible]
China[2]	26.7	[illegible]	17.6	13.8	16.4	[illegible]	31.0	8.5	[illegible]	[illegible]	[illegible]
Egypt	m	[illegible]	22.0	12.8	17.1	m	m	m	m	[illegible]	[illegible]
India[1, 2]	m	[illegible]	22.0	9.2	16.1	[illegible]	m	m	m	[illegible]	[illegible]
Indonesia[3]	33.0	27.1	19.6	17.8	18.9	a	x(9)	x(9)	[illegible]	[illegible]	[illegible]
Jamaica[4]	22.1	30.4	x(5)	x(5)	18.5	[illegible]	19.4	13.4	[illegible]	[illegible]	[illegible]
Jordan[1]	19.4	x(3)	21.2	16.9	20.6	a	15.6	34.9	[illegible]	[illegible]	[illegible]
Malaysia[2]	26.9	21.3	x(5)	x(5)	17.9	24.7	17.3	20.2	19.	[illegible]	[illegible]
Paraguay[2, 4]	x(2)	18.0	x(5)	x(5)	30.6	a	17.2	m	[illegible]	[illegible]	[illegible]
Peru[2, 4]	25.9	26.8	x(5)	x(5)	18.5	m	m	m	m	[illegible]	[illegible]
Philippines[2]	32.9	34.7	40.5	21.2	34.1	m	a	23.6	23.6	[illegible]	[illegible]
Russian Federation[3]	7.0	17.3	m	m	m	10.2	15.1	15.3	15.2	12.6	m
Tunisia[1]	19.8	23.3	24.9	17.4	21.5	m	x(9)	x(9)	19.2	30.6	41.3
Uruguay[2]	31.3	20.4	11.9	22.6	14.9	a	x(9)	x(9)	8.1	12.8	23.2
Zimbabwe[4]	m	37.0	x(5)	x(5)	24.7	m	m	m	m	29.6	31.7
WEI mean	***23.6***	***26.6***	***23.7***	***18.9***	***21.7***	***16.5***	~	~	***16.5***	***27.1***	***30.5***
OECD countries											
Australia[5]	m	17.3	m	m	12.6	m	m	14.8	m	m	m
Belgium*	x(2)	15.0	x(5)	x(5)	9.7	x(5)	x(9)	x(9)	19.9	m	m
Canada	18.1	18.1	18.1	19.5	18.8	x(9)	x(9)	x(9)	9.8	m	m
Czech Republic	13.1	19.7	14.7	11.5	13.1	11.0	12.1	13.7	13.5	m	m
Denmark	6.6	10.4	11.4	14.4	12.8	m	m	m	m	m	m
Finland*	12.2	16.9	10.7	17.0	13.8	x(4)	x(4)	16.1	m	m	m
France	19.1	19.8	14.7	10.4	12.5	11.4	16.2	18.6	18.3	m	m
Germany*	23.6	19.8	15.7	13.9	15.2	14.3	14.9	11.7	12.1	m	m
Greece	15.8	13.4	10.8	10.5	10.7	m	23.3	28.9	26.8	m	m
Hungary	11.6	10.9	10.9	11.4	11.2	x(4)	x(9)	x(9)	13.1	m	m
Iceland	5.4	x(3)	12.7	9.7	m	m	m	8.3	7.9	m	m
Ireland*	15.1	21.5	15.9	x(3)	x(3)	x(3)	14.8	19.4	17.4	m	m
Italy*	13.0	11.0	10.4	10.2	10.3	m	6.0	24.1	22.8	m	m
Japan	18.8	20.9	16.8	14.0	15.2	m	8.8	12.9	11.4	m	m
Korea	23.1	32.1	21.5	20.9	21.2	a	m	m	m	m	m
Luxembourg[1]	20.2	15.9	x(5)	x(5)	9.2	m	m	m	m	m	m
Mexico	22.4	27.2	34.8	26.5	31.7	m	x(9)	x(9)	15.1	m	m
Netherlands	x(2)	16.8	x(5)	x(5)	17.1	x(5)	m	m	12.6	m	m
New Zealand	7.5	20.6	19.9	13.1	16.3	12.6	13.2	15.8	15.2	m	m
Norway	m	12.4	9.9	9.7	m	x(4)	x(9)	x(9)	12.7	m	m
Poland	13.1	12.7	11.5	16.9	15.5	17.1	8.4	14.9	14.7	m	m
Portugal	16.4	12.1	10.4	7.9	9.0	m	x(9)	x(9)	m	m	m
Slovak Republic	10.1	18.3	13.5	12.8	13.2	9.0	7.4	10.3	10.2	m	m
Spain	16.1	14.9	x(5)	x(5)	11.9	x(5)	10.5	16.9	15.9	m	m
Sweden	m	12.8	12.8	15.2	14.1	m	x(9)	x(9)	9.3	m	m
Turkey	16.0	30.5	m	14.0	14.0	m	m	m	m	m	m
United Kingdom[5]*	21.0	21.2	17.6	12.5	14.8	m	x(9)	x(9)	17.6	m	m
United States	18.7	15.8	16.3	14.1	15.2	10.1	9.5	14.8	13.5	m	m
OECD Mean	***15.5***	***17.9***	***15.1***	***13.9***	***14.3***	***12.2***	***12.1***	***16.1***	***14.7***	~	~

Note: Class size is estimated by weighting the student-teacher ratio by statutory teaching time and instruction time.

1. Only public institutions are included.
2. Year of reference 1999.
3. Year of reference 2001.
4. In column 11, upper secondary is included in lower secondary.
5. Includes only general programmes at lower and upper secondary education.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI.

Table 32

Intended instruction time for students in public institutions (2000)

Total intended instruction time per year in hours for students aged 9–14

	Age 9	Age 10	Age 11	Age 12	Age 13	Age 14	Total for ages 9–11 (Cols. 1+2+3)	Total for ages 12–14 (Cols. 4+5+6)	Duration per session (in minutes)
	1	2	3	4	5	6	7	8	9
WEI participants									
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	187	[illegible]	[illegible]
Brazil	800	800	800	800	[illegible]	800	2 400	[illegible]	[illegible]
Chile	1 140	1 140	900	990	[illegible]	1 260	3 180	3 240	45
China	771	771	771	893	[illegible]	1 020	2 312	2 805	40
Egypt	1 026	1 053	1 026	1 026	999	m	3 105	m	45
India	1 051	1 051	1 051	1 176	1 176	1 176	3 152	3 528	35
Indonesia	1 064	1 120	1 176	1 176	1 323	1 323	3 360	3 822	40
Jamaica	950	950	950	950	950	950	2 850	2 850	38
Jordan	802	945	974	974	945	974	2 722	2 894	45
Malaysia	964	964	964	1 230	1 230	1 230	2 891	3 690	30
Paraguay	753	753	753	1 011	1 011	1 011	2 258	3 034	40
Peru[1]	783	783	783	914	914	914	2 349	2 741	45
Philippines	1 067	1 067	1 067	1 467	1 467	1 467	3 200	4 400	40
Russian Federation	630	893	919	971	998	998	2 441	2 966	45
Thailand	1 080	1 200	1 200	1 167	1 167	1 167	3 480	3 500	20 or 40
Tunisia	960	960	960	900	900	900	2 880	2 700	60
Uruguay	455	455	455	863	863	1 011	1 365	2 738	60
Zimbabwe	753	753	753	753	1 375	1 375	2 259	3 502	30
WEI mean	***876***	***910***	***902***	[illegible]	[illegible]	***1 089***	***3 688***	[illegible]	***44***
OECD countries									
Australia*	986	987	987	1 014	1 020	1 023	2 960	3 058	m
Austria	m	m	m	1 013	1 169	1 262	m	3 444	m
Belgium (Fl.)*	831	831	831	955	955	a	2 492	1 909	m
Belgium (Fr.)	m	m	m	1 044	1 106	a	m	2 150	m
Czech Republic*	716	738	803	828	886	886	2 257	2 600	m
Denmark	750	810	810	840	900	930	2 370	2 670	m
England	890	890	890	940	940	940	2 670	2 820	m
Finland*	684	684	713	713	855	855	2 081	2 423	m
France	802	802	837	960	1 100	1 066	2 441	3 126	m
Germany	752	774	862	874	915	918	2 388	2 708	m
Greece*	928	928	928	1 064	1 064	1 064	2 784	3 192	m
Hungary*	733	867	902	971	902	902	2 502	2 775	m
Iceland	630	700	747	793	817	817	2 077	2 427	m
Ireland*	941	941	941	891	891	891	2 822	2 672	m
Italy	1 020	1 020	1 020	1 020	1 020	m	3 060	2 040	m
Japan	761	761	761	875	875	875	2 284	2 625	m
Korea	706	752	752	867	867	867	2 210	2 601	m
Mexico	800	800	800	1 167	1 167	1 167	2 400	3 500	m
Netherlands*	1 000	m	1 000	1 067	1 067	1 067	2 000	3 200	m
New Zealand	985	985	985	985	930	930	2 955	2 845	m
Norway	m	770	770	770	855	855	1 539	2 480	m
Portugal	815	842	842	842	842	842	2 499	2 527	m
Scotland*	1 000	1 000	1 000	1 000	1 000	1 000	3 000	3 000	m
Spain*	795	795	795	795	870	870	2 384	2 535	m
Sweden	741	741	741	741	741	741	2 222	2 222	m
Turkey	796	796	796	796	796	m	2 388	1 592	m
OECD mean	***829***	***835***	***855***	***916***	***944***	***944***	***2 519***	***2 804***	~

1 Year of reference 1999

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source. OECD/UNESCO WEI.

Table 33

Statutory number of teaching hours and weeks per year in public institutions by level of education (2000)

	Teaching hours per year				Teaching weeks per year			
	Primary	Lower secondary	Upper secondary, general programmes	Upper secondary, vocational programmes	Primary	Lower secondary	Upper secondary, general programmes	Upper secondary, vocational programmes
	1	2	3	4	5	6	7	8
WEI participants								
Argentina	765	850	755	870	38	38	38	38
Brazil	800	800	800	800	40	40	40	40
Chile	860	860	860	860	40	40	40	40
Egypt	748	748	748	748	36	36	36	36
India	743	825	825	825	42	42	42	42
Indonesia	1 260	738	738	738	44	44	44	44
Jamaica	950	950	646	988	38	38	38	38
Jordan	774	774	659	965	44	44	44	44
Malaysia	758	774	774	m	41	41	41	41
Paraguay	720	801	900	954	35	37	37	37
Peru[1]	783	626	626	626	36	36	36	36
Philippines	1 176	1 176	980	a	40	40	40	40
Russian Federation	820	738	738	m	43	43	43	43
Thailand	760	652	652	615	40	40	40	40
Tunisia	730	544	544	544	33	32	30	30
Uruguay[2]	732	489	489	489	38	38	38	38
Zimbabwe	975	936	936	936	39	39	39	39
WEI mean	***844***	***781***	***745***	***783***	***39***	***39***	***39***	***39***
OECD countries								
Australia	882	811	803	m	40	40	m	m
Austria	684	658	623	m	38	38	m	m
Belgium (Fl.)	831	716	671	m	37	37	m	m
Belgium (Fr.)	804	728	673	m	38	38	m	m
Czech Republic	650	650	621	m	40	40	m	m
Denmark	640	640	560	m	42	42	m	m
England	a	a	a	m	38	38	m	m
Finland	656	485–656	428–627	m	38	38	m	m
France	907	639	611	m	35	35	m	m
Germany	783	732	690	m	39	39	m	m
Greece	780	629	629	m	40	38	m	m
Hungary	777	555	555	m	37	37	m	m
Iceland	629	629	464	m	38	38	m	m
Ireland	915	735	735	m	37	33	m	m
Italy	748	612	612	m	34	34	m	m
Japan	635	557	478	m	35	35	m	m
Korea	829	565	545	m	37	37	m	m
Mexico	800	1 182	m	m	42	42	m	m
Netherlands	930	867	867	m	40	40	m	m
New Zealand	985	968	950	m	39	39	m	m
Norway	713	633	589	m	38	38	m	m
Portugal	815	595	515	m	34	34	m	m
Scotland	950	893	893	m	38	38	m	m
Spain	880	564	548	m	37	36	m	m
Switzerland	884	859	674	m	38	38	m	m
Turkey	639	639	504	m	38	m	m	m
United States[3]	1 139	1 127	1 121	m	36	36	m	m
OECD mean	***805***	***718***	***640***	~	***38***	***37***	~	~

1 Year of reference 1999.
2 Teaching time is for a position of 20 hours per week; most teachers hold two positions
3 The number of teaching weeks is estimated on the basis of the PISA average
Source: OECD/UNESCO WEI.

Table 34

Gender distribution of teachers (2000)

Percentage of women among teaching staff in public and private institutions by level of education, based on head counts

	Pre-primary	Primary	Lower secondary	Upper secondary, all programmes	Upper secondary, general programmes	Upper secondary, vocational programmes	Post-secondary non-tertiary	Tertiary, Type B programmes	Tertiary, Type A and advanced research programmes	All levels of education
	1	2	3	4	5	6	7	8	9	10
WEI participants										
Argentina[1]	96.6	88.8	71.0	63.0	58.1	53.9	x	51.0	40.0	71.1
Brazil[1]	98.1	92.6	84.2	59.6	60.6	x	m	x	40.8	83.2
Chile[1]	98.1	73.2	73.2	53.0	51.9	46.7	x	m	m	68.4
India[1]	93.8	31.2	36.3	17.0	40.1	18.9	14.9	14.0	15.0	32.3
Indonesia[2]	98.1	53.7	29.1	19.1	42.0	34.3	x	x	37.8	45.1
Jamaica	98.0	89.8	66.6	x	x	x	m	x	m	m
Jordan	99.8	x	62.8	44.9	52.8	41.0	x	m	m	62.6
Malaysia[1, 3]	100.0	63.9	x	56.0	56.0	x	19.9	33.5	43.6	61.3
Peru[1]	98.4	62.0	44.1	x	x	x	m	m	m	58.7
Philippines[1]	m	87.4	76.3	76.3	76.3	a	m	a	m	84.1
Russian Federation[2]	m	98.3	x	x	x	x	61.4	72.1	47.7	76.8
Tunisia	96.0	49.7	46.0	34.6	37.6	n	m	31.8	x	45.7
Zimbabwe	m	48.3	37.4	x	x	a	24.8	27.4	m	44.3
WEI mean	***97.7***	***69.1***	***57.1***	***51.9***	***54.1***	***41.6***	***19.7***	***41.1***	***38.7***	***61.7***
OECD Countries										
Australia	m	m	m	m	m	m	m	m	36.1	m
Belgium (Fl.)*	99.1	74.4	x	56.2	x	x	x	42.2	14.3	64.3
Canada	68.0	68.0	68.0	68.0	68.0	a	x	x	33.3	60.4
Czech Republic	99.7	84.4	82.4	55.7	68.3	53.5	47.1	58.8	32.6	71.2
Denmark	92.0	64.0	64.0	33.9	39.3	27.8	m	m	m	68.6
Finland*	96.5	71.7	71.1	56.4	68.0	50.7	x	x	45.3	66.3
France	x(4)	80.0	64.1	47.0	55.0	33.0	33.0	x	33.0	61.0
Germany	95.0	81.2	58.7	39.6	39.8	39.5	36.0	46.6	26.7	57.7
Hungary*	100.0	84.9	84.5	59.4	66.7	55.8	x	x	38.5	75.4
Iceland*	98.5	77.8	x	45.1	x	x	x	56.2	41.4	73.1
Ireland*	91.2	85.1	57.6	x	x	x	x	31.4	35.7	62.6
Italy*	99.3	94.8	72.8	58.9	x	x	m	31.2	29.9	75.4
Korea	99.7	70.3	59.7	30.5	29.6	31.9	a	30.1	25.3	48.6
Luxembourg[3]*	97.6	60.5	40.2	x	x	x	m	m	m	53.7
Mexico	93.7	65.4	47.2	39.8	38.7	45.5	a	x	x	59.9
Netherlands*	x(4)	75.5	x	40.2	37.3	45.9	x	m	m	m
New Zealand	98.7	83.8	65.0	54.6	57.5	49.1	50.3	50.2	41.8	68.0
Norway*	m	x	72.3	44.3	44.3	x	x	x	35.9	59.9
Slovak Republic	99.9	90.3	75.6	66.6	72.1	65.2	x	x	36.8	75.5
Spain*	94.9	69.1	x	50.3	x	x	xc	49.8	33.7	58.5
Sweden*	96.7	80.4	62.1	50.2	55.9	45.8	26.9	x	38.3	67.4
United Kingdom	95.3	81.1	58.8	58.5	58.8	58.2	a	x	x	64.5
United States	94.7	86.5	60.2	50.8	50.8	a	40.7	49.0	38.0	65.9
OECD mean	***95.3***	***77.6***	***64.7***	***50.3***	***53.1***	***46.3***	***39.0***	***44.6***	***34.3***	***64.7***

1. Year of reference 1999.
2. Year of reference 2001.
3. Only public institutions are included.

* See Annex 3 of *Education at a Glance*, 2002, for notes (www.oecd.org/els/education/eag2002).

Source: OECD/UNESCO WEI.

Table 35a

Teachers' salaries in public institutions (2000)

Annual statutory teachers' salaries in public institutions by teachers' experience, in equivalent US$ converted using PPPs

	Primary			Lower secondary			Upper secondary general programmes				Salary per hour of net contact (teaching) time after 15 years of experience		
	Starting salary / minimum training	Salary after 15 years of experience/ minimum training	Salary at top of scale/ minimum training	Starting salary/ minimum training	Salary after 15 years of experience/ minimum training	Salary at top of scale/ minimum training	Starting salary/ minimum training	Salary after 15 years of experience/ minimum training	Salary at top of scale/ minimum training	Years from starting to top salary (lower secondary)	Primary	Lower secondary	Upper secondary, general programmes
	1	2	3	4	5	6	7	8	9	10	11	12	13
WEI participants													
Indonesia	[illegible]	[illegible]	14 891	14 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]-24	[illegible]	[illegible]	[illegible]
Brazil	[illegible]	[illegible]	11 309	14 820	[illegible]	[illegible]	[illegible]	[illegible]	19 776	25	m	m	m
Chile	[illegible]	[illegible]	16 122	10 716	12 038	[illegible]	[illegible]	[illegible]	16 883	30	[illegible]	[illegible]	[illegible]
China	2 835	[illegible]	3 595	2 835	2 952	[illegible]	[illegible]	2 952	3 595	m	m	m	m
Egypt	2 269	[illegible]	m	2 269	5 065	m	[illegible]	5 065	m	m	8	8	8
Indonesia	1 357	[illegible]	4 093	1 357	2 148	[illegible]	[illegible]	2 586	4 093	32	2	4	4
Jamaica	8 332	9 927	9 927	8 332	9 927	[illegible]	8 332	9 927	9 927	12	10	14	15
Jordan	7 838	10 200	26 475	7 838	10 200	26 [illegible]	7 838	10 200	26 475	13	13	13	15
Malaysia	6 158	10 225	14 623	11 784	18 632	25 775	11 784	18 632	25 775	22	13	24	24
Paraguay[1]	8 874	8 874	8 874	13 911	13 911	13 911	13 911	13 911	13 911	a	12	17	15
Peru	5 523	5 523	5 523	5 462	5 462	5 462	5 462	5 462	5 462	at least 20	8	10	10
Philippines	10 409	11 491	12 374	10 409	11 491	12 374	10 409	11 491	12 374	22	10	10	12
Thailand	5 756	14 145	26 977	5 756	14 145	26 977	5 756	14 145	26 977	37	19	22	22
Tunisia[3]	13 186	14 505	15 149	16 965	18 549	19 340	20 540	22 270	23 177	30	25	40	48
Uruguay[4]	5 749	6 891	8 317	5 749	6 891	8 317	6 257	7 398	8 874	24	9	14	15
WEI mean	***7 030***	***9 114***	***12 732***	***8 855***	***11 256***	***15 488***	***9 176***	***11 595***	***15 928***	***28***	***11***	***15***	***16***
OECD countries													
Australia	26 887	38 297	38 300	26 946	38 312	38 314	26 946	38 312	38 314	8	43	47	48
Austria	21 953	26 570	44 461	22 574	27 691	47 055	24 192	30 584	53 808	34	39	42	49
Belgium (Fl)	24 122	32 318	38 328	24 336	34 079	41 547	30 194	43 580	52 383	27	39	48	65
Belgium (Fr)	22 983	31 282	37 459	23 466	33 173	40 666	29 275	42 707	51 540	27	39	46	64
Czech Republic	7 043	9 339	12 524	7 043	9 339	12 524	8 570	11 381	15 221	32	14	14	18
Denmark	29 116	32 883	32 883	29 116	32 883	32 883	28 825	38 279	40 931	8	51	51	68
England	22 428	35 487	35 487	22 428	35 487	35 487	22 428	35 487	35 487	8	m	m	m
Finland	18 489	25 183	26 140	20 720	28 690	30 124	21 517	30 124	31 878	20	38	50	57
France	20 199	27 172	40 091	22 358	29 331	42 357	22 358	29 331	42 357	34	30	46	48
Germany	31 213	37 905	41 021	34 891	40 561	46 180	37 394	43 881	52 004	28	48	55	64
Greece	20 065	24 336	29 358	20 387	24 658	29 680	20 387	24 658	29 680	33	31	39	39
Hungary	6 086	8 659	11 805	6 086	8 659	11 805	7 375	10 896	14 562	40	11	16	20
Iceland	20 222	22 202	25 738	20 222	22 202	25 738	21 071	26 162	31 394	18	35	35	56
Ireland	22 063	35 760	40 365	23 163	36 145	40 750	23 163	36 145	40 750	22	39	49	49
Italy	20 927	25 115	30 306	22 657	27 507	33 510	22 657	28 329	35 138	35	34	45	46
Japan	22 670	42 820	54 663	22 670	42 820	54 663	22 670	42 845	56 307	31	67	77	90
Korea	26 300	43 952	69 818	26 148	43 800	69 666	26 148	43 800	69 666	37	53	77	80
Mexico	11 235	14 824	24 536	14 383	18 760	30 859	m	m	m	14	19	16	m
Netherlands	27 411	32 686	39 563	28 443	34 985	43 466	28 713	48 840	57 907	22	35	40	56
New Zealand	17 354	33 653	33 653	17 354	33 653	33 653	17 354	33 653	33 653	10	34	35	35
Norway	23 752	26 831	29 051	23 752	26 831	29 051	23 752	26 831	29 051	28	38	42	53
Portugal	17 914	26 607	49 492	17 914	26 607	49 492	17 914	26 607	49 492	26	33	45	52
Scotland	20 931	34 798	34 798	20 931	34 798	34 798	20 931	34 798	34 798	11	37	39	39
Spain	25 029	29 261	37 238	27 046	31 616	39 804	29 081	33 985	42 521	42	33	56	62
Sweden	19 893	25 553	m	19 893	25 553	m	21 663	27 241	m	a	a	a	a
Switzerland	34 808	45 728	54 308	41 048	54 763	63 534	49 123	65 041	73 946	23	52	64	96
Turkey	12 410	14 094	15 760	m	m	m	11 354	13 038	14 704	a	22	a	26
United States	27 631	40 072	48 782	27 643	40 072	47 908	27 751	40 181	48 037	m	35	36	36
OECD mean	***21 469***	***29 407***	***36 145***	***22 727***	***31 221***	***38 674***	***23 808***	***33 582***	***41 366***	***25***	***36***	***44***	***53***

1. Salaries are for 130 hours per month, most teachers hold two positions
2 Year of reference 1999
3 Includes additional bonuses
4 Salaries are for a position of 20 hours per week, most teachers hold two positions
Source: OECD/UNESCO WEI

Table 35b

Teachers' salaries in public institutions in relative terms (2000)

Ratio of statutory salary after 15 years of experience relative to starting salary and GDP per capita, by level of education, years from starting to top salary at lower secondary level, and ratio of salary per teaching hours of upper secondary teachers relative to primary teachers (after 15 years of experience)

	Ratio of salary after 15 years of experience to starting salary			Ratio of salary after 15 years of experience to GDP per capita				
	Primary	Lower secondary	Upper secondary, general programmes	Primary	Lower secondary	Upper secondary, general programmes	Years from starting to top salary (lower secondary)	Ratio of salary per teaching hour of upper secondary teachers to primary teachers (after 15 years of experience)
	1	2	3	4	5	6	7	8
WEI participants								
Argentina	1.33	1.51	1.11	1.00	1.69	1.69	21 [3]	1.71
Brazil	0.97	1.10	1.04	1.48	2.36	2.35	35	m
Chile	1.09	1.09	1.12	1.39	1.39	1.45	10	1.00
China	1.04	1.04	1.04	0.88	0.88	0.88	m	m
Egypt	2.11	2.11	2.11	1.58	1.58	1.58	m	1.00
Indonesia	1.81	1.81	2.09	0.77	0.77	0.93	10	2.20
Jamaica	2.53	2.53	2.53	2.82	2.82	2.82	0	1.47
Jordan	1.30	1.30	1.30	2.66	2.66	2.66	13	1.17
Malaysia	1.67	1.59	1.59	1.33	2.43	2.43	22	1.79
Paraguay [1]	1.15	1.15	1.15	2.00	3.13	3.13	a	1.25
Peru [3]	1.00	1.00	1.00	1.19	1.18	1.18	at least 20	1.19
Philippines	1.09	1.09	1.09	3.10	3.10	3.10	22	1.20
Thailand	2.46	2.46	2.46	2.42	2.42	2.42	37	1.17
Tunisia [1]	1.10	1.09	1.08	2.60	3.30	4.00	30	1.92
Uruguay [4]	1.19	1.19	1.21	0.76	0.76	0.82	24	1.61
WEI mean	***1.48***	***1.46***	***1.48***	***1.73***	***2.03***	***2.10***	***28***	***1.44***
OECD countries								
Australia	1.42	1.42	1.42	1.43	1.43	1.43	8	1.10
Austria	1.21	1.23	1.26	1.03	1.07	1.19	34	1.27
Belgium (Fl.)	1.34	1.40	1.44	1.22	1.28	1.64	27	1.67
Belgium (Fr.)	1.36	1.41	1.46	1.18	1.25	1.61	27	1.64
Czech Republic	1.33	1.33	1.33	0.65	0.65	0.80	32	1.28
Denmark	1.13	1.13	1.33	1.16	1.16	1.35	8	1.33
England	1.58	1.58	1.58	1.48	1.48	1.48	8	m
Finland	1.36	1.38	1.40	1.03	1.18	1.23	20	1.49
France	1.35	1.31	1.31	1.17	1.26	1.26	34	1.60
Germany	1.21	1.16	1.17	1.52	1.63	1.76	28	1.31
Greece	1.21	1.21	1.21	1.50	1.52	1.52	33	1.26
Hungary	1.42	1.42	1.48	0.71	0.71	0.89	40	1.76
Iceland	1.10	1.10	1.24	0.80	0.80	0.95	18	1.60
Ireland	1.62	1.56	1.56	1.24	1.25	1.25	22	1.26
Italy	1.20	1.21	1.25	1.03	1.13	1.16	35	1.38
Japan	1.89	1.89	1.89	1.62	1.62	1.62	31	1.33
Korea	1.67	1.68	1.68	2.49	2.48	2.48	37	1.52
Mexico	1.32	1.30	m	1.62	2.05	m	14	m
Netherlands	1.19	1.23	1.70	1.18	1.26	1.77	22	1.60
New Zealand	1.94	1.94	1.94	1.70	1.70	1.70	10	1.04
Norway	1.13	1.13	1.13	0.92	0.92	0.92	28	1.41
Portugal	1.49	1.49	1.49	1.52	1.52	1.52	26	1.58
Scotland	1.66	1.66	1.66	1.45	1.45	1.45	11	1.06
Spain	1.17	1.17	1.17	1.52	1.65	1.77	42	1.87
Sweden	1.28	1.28	1.26	1.05	1.05	1.12	a	a
Switzerland	1.31	1.33	1.32	1.53	1.83	2.18	23	1.87
Turkey	1.14	a	1.15	2.06	m	1.91	a	1.17
United States	1.45	1.45	1.45	1.12	1.12	1.12	m	1.02
OECD mean	***1.37***	***1.39***	***1.42***	***1.32***	***1.35***	***1.45***	***25***	***1.42***

1. Salaries are for 130 hours per month, most teachers hold two positions.
2. Year of reference 1999.
3. Includes additional bonuses.
4. Salaries are for a position of 20 hours per week, most teachers hold two positions.

Source. OECD/UNESCO WEI.

ANNEX A5*a* – INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED97)

ANNEX A5*b* – ALLOCATION OF NATIONAL EDUCATION PROGRAMMES TO ISCED97 USED IN WEI DATA COLLECTION

- Argentina
- Brazil
- Chile
- China
- Egypt
- India
- Indonesia
- Jamaica
- Jordan
- Malaysia
- Paraguay
- Peru
- Philippines
- Russian Federation
- Sri Lanka
- Thailand
- Tunisia
- Uruguay
- Zimbabwe

ANNEX A5*a*
INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED97)

0 PRE-PRIMARY LEVEL	Main criteria	Auxiliary criteria
Initial stage of organized instruction, designed primarily to introduce very young children to a school type environment	Should be centre- or school-based, designed to meet the educational and developmental needs of children at least three years of age, and have staff that are adequately trained (i.e. qualified) to provide an educational programme for the children	Pedagogical qualifications for the teaching staff, implementation of a curriculum with educational elements

1 PRIMARY LEVEL	Main criteria	Auxiliary criteria
Normally designed to give students a sound basic education in reading, writing and mathematics	Beginning of systematic studies characteristic of primary education, e.g. reading, writing and mathematics. Entry into the nationally designated primary institutions or programmes. The commencement of reading activities alone is not a sufficient criterion for classification of an educational programme at ISCED 1	In countries where the age of compulsory attendance (or at least the age at which virtually all students begin their education) comes after the beginning of systematic study in the subjects noted, the first year of compulsory attendance should be used to determine the boundary between ISCED 0 and ISCED 1.

2 LOWER SECONDARY LEVEL	Main criteria	Auxiliary criteria
The lower secondary level of education generally continues the basic programmes of the primary level, although teaching is typically more subject focused, often employing more specialized teachers who conduct classes in their field of specialization.	Programmes at the start of Level 2 should correspond to the point where programmes are beginning to be organized in a more subject-oriented pattern, using more specialized teachers conducting classes in their field of specialization. If this organizational transition point does not correspond with a natural split in the boundaries between national educational programmes, then programmes should be split at the point where national programmes begin to reflect this organizational change	If there is no clear break point for this organizational change, countries should artificially split national programmes into ISCED 1 and 2 at the end of six years of primary education. In countries with no system break between lower secondary and upper secondary education, and where lower secondary education lasts for more than three years, only the first three years following primary education should be counted as lower secondary education.

3 UPPER SECONDARY LEVEL	Main criteria	Modular programmes
The final stage of secondary education in most OECD countries Instruction is often more organized along subject-matter lines than at ISCED 2 and teachers typically need to have a higher level or more subject-specific qualification than at ISCED 2	National boundaries between lower secondary and upper secondary education should be the dominant factor for splitting Levels 2 and 3. Admission into educational programmes usually require the completion of ISCED 2 for admission, or a combination of basic education and life experience that demonstrates the ability to handle ISCED 3 subject matter.	An educational qualification is earned in a modular programme by combining blocks of courses, or modules, into a programme meeting specific curricular requirements. A single module, however, may not have a specific educational or labour market destination or a particular programme orientation. Modular programmes should be classified at Level 3 only, without reference to the educational or labour market destination of the programme.

4 POST-SECONDARY NON-TERTIARY	Main criteria	Types of programmes which can fit into Level 4
These programmes straddle the boundary between upper secondary and post-secondary education from an international point of view, even though they might clearly be considered as upper secondary or post-secondary programmes in a national context. They are often not significantly more advanced than programmes at ISCED 3 but they serve to broaden the knowledge of participants who have already completed a programme at Level 3. The students are typically older than those in ISCED 3 programmes. ISCED 4 programmes typically have a full time-equivalent (FTE) duration of between six months and two years.	Students entering ISCED 4 programmes will typically have completed ISCED 3. As described above, successful completion of any programme at Level 3A or 3B counts as a Level 3 completion. For 3C programmes, a cumulative theoretical duration of three years is specified in ISCED97 as the minimum programme length in order meet the requirements for a Level 3 completion.	Short vocational programmes where either the content is not considered 'tertiary' in many OECD countries or the programme does not meet the duration requirement for ISCED 5B – at least two years FTE since the start of Level 5. These programmes are often designed for students who have completed Level 3, although a formal ISCED 3 qualification may not be required for entry. Also, programmes are nationally considered as upper secondary programmes, even though entrants to these programmes will have typically already completed another upper secondary programme (i.e. second cycle programmes).

5 FIRST STAGE OF TERTIARY EDUCATION	Classification criteria for level and sub-categories (5A and 5B)
ISCED 5 programmes have an educational content more advanced than those offered at Levels 3 and 4.	Entry to these programmes normally requires the successful completion of ISCED 3A or 3B or a similar qualification at ISCED 4A or 4B (see next page). Programmes at Level 5 must have a cumulative theoretical duration of at least two years from the beginning of the first programme.
5A ISCED 5A programmes are largely theoretically based and intended to provide sufficient qualifications for gaining entry into advanced research programmes and professions with high skills requirements.	1. A minimum cumulative theoretical duration (at tertiary level) of three years (FTE). 2. Typically requires that the faculty have advanced research credentials. 3. May involve completion of a research project or thesis. 4. Provides the level of education required for entry into a profession with high skills requirements or an advanced research programme.
5B ISCED 5B programmes are generally more practical/technical/occupationally specific than ISCED 5A programmes.	1. More practically oriented and occupationally specific than programmes at ISCED 5A and does not prepare students for direct access to advanced research programmes. 2. A minimum of two years' FTE duration. 3. Programme content is typically designed to prepare students to enter a particular occupation.

6 SECONDARY STAGE OF TERTIARY EDUCATION	(Leading to an advanced research qualification)
This level is reserved for tertiary programmes that lead to the award of an advanced research qualification. The programmes are devoted to advanced study and original research.	1. Requires the submission of a thesis or dissertation of publishable quality that is the product of original research and represents a significant contribution to knowledge. 2. Not solely based on course work. 3. Prepares recipients for faculty posts in institutions offering ISCED 5A programmes as well as research posts in government and industry.

Destination for which the programmes have been designed to prepare students	Programme orientation
2A Programmes designed to prepare students for direct access to Level 3 in a sequence which would ultimately lead to tertiary education, i.e. entrance to ISCED 3A or 3B.	1 Education which is not designed explicitly to prepare participants for a specific class of occupations or trades or for entry into further vocational/technical education programmes. Less than 25 per cent of the programme content is vocational or technical.
2B Programmes designed to prepare students for direct access to programmes at Level 3C.	2 Education mainly designed as an introduction to the world of work and as preparation for further vocational or technical education. Does not lead to a labour market relevant qualification. Content is at least 25 per cent vocational or technical.
2C Programmes primarily designed for direct access to the labour market at the end of this level (sometimes referred to as 'terminal' programmes).	3 Education which prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programmes leads to a labour market relevant vocational qualification.

Destination for which the programmes have been designed to prepare students	Programme orientation
3A Programmes at Level 3 designed to provide direct access to ISCED 5A.	1 Education which is not designed explicitly to prepare participants for a specific class of occupations or trades or for entry into further vocational/technical education programmes. Less than 25 per cent of the programme content is vocational or technical.
3B Programmes at Level 3 designed to provide direct access to ISCED 5B.	2 Education mainly designed as an introduction to the world of work and as preparation for further vocational or technical education. Does not lead to a labour-market relevant qualification. Content is at least 25 per cent vocational or technical.
3C Programmes at Level 3 not designed to lead directly to ISCED 5A or 5B. These programmes lead to other ISCED 3 programmes, ISCED 4 programmes or the labour market.	3 Education which prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programmes leads to a labour market relevant vocational qualification.

Destination for which the programmes have been designed to prepare students	Programme orientation
4A Programmes at Level 4, designed to provide direct access to ISCED 5A.	1 Education which is not designed explicitly to prepare participants for a specific class of occupations or trades or for entry into further vocational/technical education programmes. Less than 25 per cent of the programme content is vocational or technical.
4B Programmes at Level 4, designed to provide direct access to ISCED 5B.	2 Education mainly designed as an introduction to the world of work and as preparation for further vocational or technical education. Does not lead to a labour market relevant qualification. Content is at least 25 per cent vocational or technical.
4C Programmes at Level 4 not designed to lead directly to ISCED 5A or 5B. These programmes lead directly to other ISCED 4 programmes or the labour market.	3 Education which prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programmes leads to a labour market relevant vocational qualification.

Cumulative theoretical duration at ISCED Level 5A*	Position in the national degree and qualification structure
5A Short: three years or less Medium: more than three years to five years Long: more than five years	5A Intermediate; First; Second; Third
5B Intermediate, First, Second, Third and further	

* ISCED97 duration categories have been modified slightly to suit programmes in WEI countries.

LEGEND

PROGRAMME ORIENTATION

Type 1 *Education which is not designed explicitly to prepare participants for a specific class of occupations or trades or for entry into further vocational/technical education programmes Less than 25 per cent of the programme content is vocational or technical*

Type 2 *Education mainly designed as an introduction to the world of work and as preparation for further vocational or technical education Does not lead to a labour market relevant qualification Content is at least 25 per cent vocational or technical*

Type 3 *Education which prepares participants for direct entry, without further training, into specific occupations. Successful completion of such programmes leads to a labour market relevant vocational qualification.*

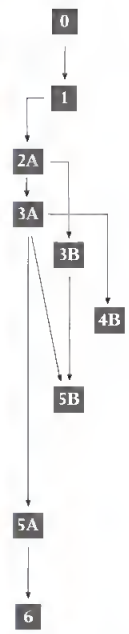
ANNEX A5*b*
ALLOCATION OF NATIONAL EDUCATION PROGRAMMES TO ISCED97 USED IN WEI DATA COLLECTION

ARGENTINA

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Pre primary *(Inicial)*			3	5	2	...	...		0
0	Pre primary, compulsory *(Inicial)*			5	6	1	...	...	Compulsory for 5-year-olds and 4-year olds in some provinces;	
1	General basic, 1st and 2nd cycle (*Educacion general basica*)	Compulsory pre primary		6	12	6	6	...	Typically a five hour school day	1
2A	General basic, 3rd cycle (*Educación general basica*)	General basic, 2nd cycle	Lower secondary diploma	12	15	3	9	...	Separate schools for youths with severe disabilities	2A
3A	Upper secondary (*Polimodal*)	Lower secondary diploma	Upper secondary diploma	15	18	3	12	...	General and technical education. It is possible to earn a technical qualification through combined work and study.	3A
5B	Tertiary, non university (*Superior no universitario*)	Upper secondary diploma	Primary and secondary teacher's diploma, technician diploma	18	21–22	3–4	...	3–4	Training for primary and secondary school teachers. Occupational training for laboratory technicians, radio operators, mechanics, librarians, social workers, etc	5B
5A (1st, medium)	University (*Superior universitario*)	Upper secondary diploma	*Licenciatura* or professional qualification	18	22–23	4–5	...	4–5	Professional qualifications can be earned at the same time as the *licenciatura* (e.g. engineering or economic degrees). Medical programmes are six years in duration, fine arts programmes are seven years	5A
5A (2nd)	University (*Posgrados*)	University degree (e.g. *licenciatura*, accountant, lawyer)	Master's degree, specialization diploma	...	...	...	...	...	ISCED 5A, second degree programmes were recently introduced and do not have uniform curricular organization and entrance requirements. Thus, it is difficult to indicate typical starting and completion ages, duration, etc	
6	Doctorate (*Posgrados – doctorados*)	University degree (e.g. *licenciatura*, accountant, lawyer) or master's degree	Doctorate	...	...	...	...	...	ISCED 6 programmes were recently introduced and do not have uniform curricular organization and entrance requirements. Thus, it is difficult to indicate typical starting and completion ages, duration, etc	6

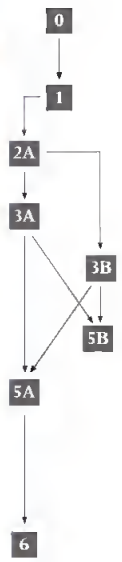
BRAZIL

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Nursery school			0	3	3	...	...		
0	Pre school			4	7	3	...	...		
1	Basic education (1st – 4th grade)			7	11	4	4	...	1st cycle of compulsory education	
2A	Basic education (5th – 8th grade)	Primary education	Primary diploma	11	15	4	8	...	2nd cycle of compulsory education.	
3A	Secondary	Primary diploma	Secondary diploma	15	18	3	11	...		
3B	Teacher training	Primary diploma	Primary teacher's certificate	15	18	3	11	...		
4B	Post-secondary, vocational	Secondary diploma	Technical qualification certificate	...	...	2–4	...	...		
5B	Tertiary, non university	Secondary diploma	Primary and secondary teacher's diploma, technology diploma, professional certificate	18	21–22	3–4	...	3–4		
5A (1st, long)	University	Secondary diploma	Teacher's diploma, bachelor s degree	18	22–24	4–6	...	4–6	Bachelor qualifications can be earned at the same time as a teacher's certificate. Medical programmes are six years in duration	
6	Master's (*Mestrado*)	University degree	Master's degree, specialization diploma	22+	24+	2	...	6–8		
6	Doctorate (*Doutarado*)	University degree or master's degree	Doctorate	22+	26+	4	...	6–12		



CHILE

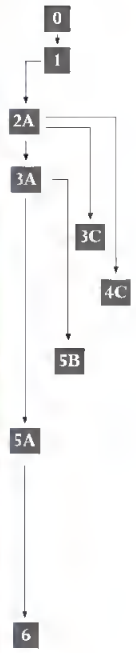
ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Nursery			2	4	2	..	..		
0	Pre-primary			4	6	2	..	..		
1	Basic education (1st – 6th grade)			6	12	6	6	..	For the purposes of ISCED, the last two grades (7–8) are reported as ISCED 2A.	
2A	Basic education	Primary education	Basic education diploma	12	14	2	8	..		
3A	Secondary education, general	Basic education diploma	Middle education diploma	14	18	4	12	..		
3B	Secondary education, vocational	Basic education diploma	Middle education diploma	14	18	4	12	..		
5B	Tertiary, technical	Middle education diploma	Technical diploma with specialization	18	22	4	..	4	Some institutions require passing a national examination for entrance	
5A (1st, medium)	University	Middle education diploma	Bachelor's degree or other qualification	18	23	5	..	5	The first degree in most universities. Most institutions require passing a national examination for entrance	
5A (2nd)	Tertiary, professional	Bachelor's degree or other professional qualification	Post graduate diploma	23	24	1	..	6		
6	Master's and doctorate	Bachelor's degree or other professional qualification	Master's degree or doctorate	23	25	2	..	7		



CHINA

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre primary			3	6	3	...	...	Mostly full-time.
1	Primary			6 7	11–12	5 or 6	6	.	
2A	Lower secondary	Primary		11–12	14–15	3 or 4	9	...	
3A	Upper secondary	Junior secondary school		15	18	3	12	...	
3C	Upper secondary	Junior secondary school		15	18	3	12	...	
4C	Post-secondary, non tertiary	Secondary		...	...	...	...	...	Generally, occupationally specific training but at a lower level than programmes reported in 5B
5B	Tertiary, non university	Secondary and pass national undergraduate entrance examination	Diploma	18	20–21	2–3	...	2–3	Generally, occupationally specific training
5A (1st, medium)	University	Secondary and pass national undergraduate entrance examination	Bachelor's degree	18	22	4	...	4	
5A (1st, medium)	University	Secondary and pass national undergraduate entrance examination	Bachelor's degree	18	23	5	...	5	Engineering and medicine.
5A (2nd)	Master's	Bachelor's degree	Master's degree	22	24–25	2–3	...	6–7	
6	Doctorate	Master's degree	Doctorate	24–25	27–29	3–4	...	9–11	

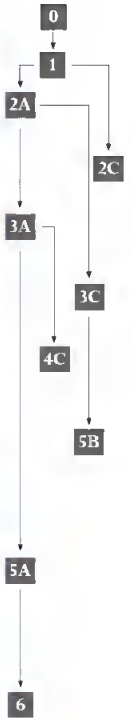
ISCED97 Flows



EGYPT

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre primary			4	6	2	..	...	
1	Primary			6	11	5	5	...	
2A	Preparatory school	Primary	Basic education certificate	11	14	3	8	..	
2C	Vocational school	Two repetitions in primary school	Certificate	13	16	3	8	..	
3A	General secondary school	High score on basic education certificate examination	Secondary school leaving certificate	14	17	3	11	..	Must pass secondary school leaving examination to graduate
3C	Technical school	Basic education certificate	Middle diploma	14	17	3–5	11–13	..	
4C	Industrial, commercial and technical institutes	Secondary school leaving certificate	Above middle diploma	17	19	2	..	..	Some new institutions offer programmes of less than two years in duration
5B	Community service, non credit, industrial, commercial and technical institutes or programmes within university	According to field of study	Certificate	17	18–19	0.5–2	..	0.5–2	Some universities offer two year, occupationally specific programmes such as accounting, secretarial, computer sciences and electronics
5A (1st, long)	University	High score on secondary school leaving examination	Bachelor's degree or licence	17	21–23	4–6	.	4–7	Medical programmes are seven years in duration.
5A (2nd)	Master's	Bachelor's degree or licence	Master's degree	21–23	23–25	2–3	..	6–10	
6	Doctorate	Master's degree	Doctorate	23–25	25+	2+	..	8+	

ISCED97 Flows



INDIA

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Nursery school, kindergarten	Test, aged 3–5	Pre primary certificate	3	5–6	2 or 3	...	...	
1	Primary	Age 6	Primary certificate	6	12	6	6	..	In some provinces admission is 5+ years of age, in others 6+ years
2A	Upper primary	Primary certificate	Upper primary certificate	12	15	3	9	...	In some provinces, state school boards conduct public examinations at Grade 8. Candidates must pass a minimum of five subjects
2C	Industrial Training Institute (ITI), lower-level technical and vocational	Upper primary certificate	ITI certificate	15	16	1	9	...	Examinations are conducted by the State Technical Boards supervised by the National Council for Vocational Training.
3A	High school	Upper primary certificate	Matriculation certificate	15	16	1	10	...	Matriculation certificate awarded after 10 years of schooling and passing a public examination organized by secondary school boards
3A	Senior secondary	Matriculation certificate	Senior secondary school leaving certificate	16	18	2	12	.	Must pass five subjects in a public examination.
5B	Tertiary, technical	Senior secondary school leaving certificate	Bachelor's degree	17–18	20–21	3		3	Nursing and paramedical studies
5B	Tertiary, technical	Senior secondary school leaving certificate	Bachelor's degree	17–18	21–22	4	..	4	Agriculture, horticulture and engineering
5B	Tertiary, professional	Senior secondary school leaving certificate	Bachelor's degree	17–18	22–23	5	...	5	Architecture
5A (1st, short)	University	Senior secondary pre-university certificate	Bachelor's degree	17–18	20–21	3	...	3	
5A (2nd)	University	Bachelor's degree	Bachelor of Education	20–21	21–22	1	...	4	
5A (2nd)	University	Bachelor's degree	Bachelor of Law	20–21	23–24	3	...	6	
5A (2nd)	Master of Arts	Bachelor's degree	Master's degree	20–21	22–23	2	...	5	
6	Master of Philosophy	Master's degree	Master of Philosophy	22–23	23–24	1	...	6	
6 (1st)	Doctor of Philosophy	Master's degree	Doctor of Philosophy	...	...	3–4	...	8–10	
6 (2nd)	Doctor of Letters	Doctor of Philosophy	Doctor of Literature or Doctor of Science	...	...	2–3	...	10–13	

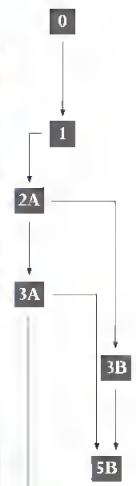
ISCED97 Flows



INDONESIA

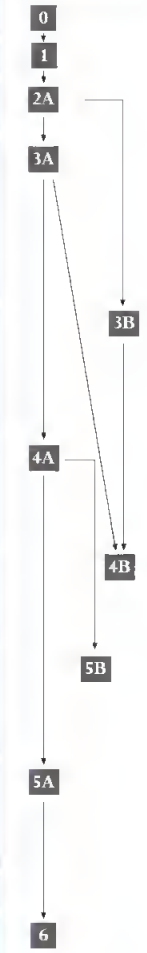
ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre primary (*Kelompok Bermain*)			3	4–5	1–?	...	...	Play group.
0	Kindergarten (*Taman Kanak-kanak*)			5	6–7	1–2	...	...	
1	Primary (*Sekolah Dasar*)			7	13	6	6	..	
2A	Junior secondary, general (*Sekolah Lanjutan Tingkat Pertama*)	Primary school	Junior secondary certificate	13	16	3	9	..	ISCED Type 1
3A	Senior secondary, general (*Sekolah Menengah Umum*)	Junior secondary certificate	Secondary school leaving certificate	16	19	3	12	..	ISCED Type 1
3B	Senior secondary, technical/vocational (*Sekolah Menengah Kejuruan*)	Junior secondary certificate	Secondary school leaving certificate	16	19–?0	3–4	12 or 13	..	ISCED Type 3.
5B	Tertiary, non university	Secondary school leaving certificate and an entrance examination	Diploma I	19	?0	1	...	1	
5B	Tertiary, non university	Secondary school leaving certificate and an entrance examination	Diploma II	19	?1	?	...	?	
5B	Tertiary, non university	Secondary school leaving certificate and an entrance examination	Diploma III	19	22	3	...	3	Entitles graduates to teach one subject at lower secondary level.
5B	Tertiary, non university	Secondary school leaving certificate and an entrance examination	Diploma IV	19	23	4	...	4	Equivalent to graduate diploma (S1).
5B	Specialist 1	Diploma IV or graduate diploma (SI)	Specialist I (SpI)	?3	?6–?8	3–5	...	6–8	Non degree certificate equivalent to master's degree. Usually requires original research or a special contribution to a field of study.
5A (1st, long)	University (*Sarjana*)	Secondary school leaving certificate and an entrance examination	Graduate diploma (SI)	19	?3–?5	4–6	...	4–6	Most degrees are four years, some like law and medicine take longer.
5A (2nd)	Master's	Graduate diploma (SI)	Master's degree (SII)	?3	?5–?8	2–5	..	6–8	
6	Doctorate	Specialist I (SpI)	Specialist II (SpII)	?5	?8+	3–5	...	9–11	Equivalent to a doctorate. Usually requires original research or a special contribution to a field of study.
6	Doctorate	Master's degree (SII)	Doctorate (SIII)	25	28+	3–5	...	9–11	Includes professional degrees awarded in faculties of medicine, veterinary medicine and dentistry.

ISCED97 Flows



JAMAICA

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Early childhood			4	6	2	..	..		
1	Primary			6	12	6	6	..		
2A	Lower secondary	Primary education	Junior high school certificate	12	15	3	9	..		
3A	Upper secondary	Completion of lower secondary	Caribbean Examination Council certificate (CXC), general certificate examination (GCE), ordinary-level certificate (O level); secondary school certificate	15	17	2	11	..		
3B	Upper secondary	Completion of lower secondary	CXC, GCE O-level, secondary school certificate, agricultural or vocational certificate	15	17	2	13	..		
4A	Post-secondary, non-tertiary	Completion of upper secondary with CXC certificate	Caribbean advanced proficiency examination (CAPE), GCE advanced level (A level)	17	19	2				
4B	Post-secondary, non-tertiary	Completion of upper secondary with or without CXC certificate	Technical or other non-tertiary certificate or diploma	17	18	0.5–1	..	..		
5B	Tertiary, professional or technical	Completion of upper secondary with CXC, A level, CAPE certificate	Professional or technical certificate or diploma, teacher's diploma	17	19–21	2–4		2–4		
5A (1st, short)	University	Completion of 2nd cycle upper secondary with CXC, A level, CAPE certificate	Bachelor's degree, diploma, certificate	17	20	3	..	3		
5A (2nd)	Master's	Bachelor's degree	Master's degree	21	23–24	1.5–3	.	4.5–6		
6	Doctorate	Master's degree	Doctorate	23	25+	2+	..	7+		



JORDAN

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Kindergarten			4	6	2	..	...	Run almost exclusively by private agencies	
1	Basic, 1st cycle			6	12	6	6	.		
2A	Basic, 2nd cycle	Basic, 1st cycle		12	16	4	10	..		
3A	Comprehensive secondary education	Basic, 2nd cycle		16	18	2	12	..		
3C	Applied secondary education	Basic, 2nd cycle		16	18	2	12	..	ISCED Type 3 Counts as ISCED Level 3 completion Preparation of skilled workers in training centres and formal apprenticeship schemes Apprenticeships are followed by one year of supervised employment	
5B	Community college	Pass general secondary education certificate examination	Diploma, entrance to university	..	..	2	..	2	Includes special programmes for teacher training which can lead to the university short programme	
5B	Community college	Pass general secondary education certificate examination	Diploma in technology, entrance to university	.	..	3	..	3		
5A (1st, short)	University	Community college diploma and teaching experience	Bachelor's degree	.	..	3	..	3	Practising teachers who have community college diplomas can enter university to upgrade their qualifications through a special government programme	
5A (1st, long)	University	Pass general or vocational secondary education certificate examination, or community college diploma with high marks	Bachelor's degree	.	..	4–6	..	4–6	Programmes in engineering, pharmacy and dentistry are five years, medicine is six years.	
5A (2nd)	University	Bachelor's degree	Education diploma	.	..	1	..	5		
5A (2nd)	University	Bachelor's degree	Master's degree	.	..	2–3	..	6–9		
6	Doctorate	Master's degree	Doctorate	.	.	3–4	..	9–13		



MALAYSIA

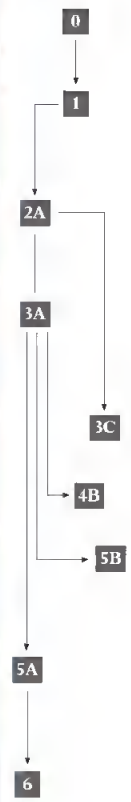
ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre school			5	6	1	...	...	
1	Primary	School age	Primary school achievement test	6	12	6	6	.	
?A	'Remove' class	Primary		12	13	1	..	...	Pupils from Chinese and Tamil primary schools spend a year in the Remove class to become proficient in Bahasa Melayu language before the transition to secondary school
2A	Lower secondary (Forms 1–3)	Primary	Lower secondary assessment	12	15	3	9	...	
3C	Upper secondary (Forms 4–5), academic	Lower secondary assessment	Certificate of education	15	17	?	11	...	ISCED Type 1. Does not count as ISCED Level 3 completion. Based on performance in the lower secondary certificate of education examination, students are placed in either academic or technical and vocational schools.
3C	Upper secondary (Forms 4–5), technical and vocational	Lower secondary assessment	Certificate of education	15	17	?	11	...	ISCED Type 3. Does not count as ISCED Level 3 completion.
3A	Pre university (Form 6, GCE, A-level)	Certificate of education	Higher school certificate of examination, General Certificate of Education (GCE)	17	19	2	13	.	Two-year pre-university course that prepares students for the higher school certificate examination.
3A	Pre-university matriculation	Certificate of education		17	19	2	13	...	
4C	Post-secondary, teacher training	Certificate of education	Teaching certificate	17	18	1	..	...	Training of pre-primary teachers
4C	Skills training	Certificate of education	Certificate	17	18–19	1–2	...	...	
5B	Tertiary, teacher training	Certificate of education	Teaching diploma, diploma in education	18	20–21	?–3	..	?–3	Training of pre-primary and primary teachers.
5B	Tertiary, polytechnical	Certificate of education	Certificate or diploma in various engineering fields	18	20–22	?–4	..	?–4	
5A (1st, short)	University	Higher school certificate of examination, GCE	Bachelor's degree	20	23	3	..	3	
5A (1st, long)	University	Higher school certificate of examination, GCE	Bachelor's degree	20	25–26	5–6	..	5–6	These programmes include medicine, dentistry and veterinary science
5A (2nd)	Master's	Bachelor's degree	Master's degree	?3	24–25	1–?	..	5–6	
6	Doctorate	Master's degree	Doctorate	24–25	26–27	?	...	7–8	
6	Doctorate	Master's degree or doctorate	Doctorate of law, literature or science	24+	29+	5–7	.	10–15	

ISCED97 Flows



PARAGUAY

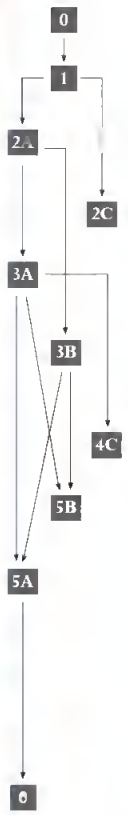
ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Pre primary (*Educacion inicial*)			3	6	3	..	..	Includes kindergarten for children aged 3–4 and pre school for children aged 5	
1	Basic school education, 1st and 2nd cycle (*Educación escolar básica, 1° y 2° ciclo*)			6	12	6	6	..	Compulsory	
2A	Basic school education, 3rd cycle (*Educacion escolar básica, 3° ciclo*)	Basic, 2nd cycle	Basic school education leaving certificate	12	15	3	9	..	Compulsory	
3A	Middle school, humanities or technical diploma (*Educación media – bachillerato humanistico / bachillerato tecnico*)	Basic, 3rd cycle	Humanities or technical diploma	15	18	3	12	..	Entrance requirement for technical education is aptitude test plus entrance examination	
3C	Technical (*Programas técnicos*)	Basic, 3rd cycle	Technical diploma	15	17	?	11	..	Occupational training for auxiliary or technical professions	
4B	Professional (*Educación profesional*)	Middle school	Diploma	18	19–20	..	?	..		
5B	Tertiary, non university (*Educación terciaria no universitaria*)	Middle school and aptitude tests and entrance examination	Teachers of pre primary, basic and middle school, or title of superior technician	18	21–22	..	..	3–4		
5A (long)	University (*Universidades*)	Completion of middle school and entrance examination or probationary course	*Licenciatura* or bachelor's degree	18	22–24	4–6	..	4–6	Includes programmes in medicine, dentistry, economics, etc	
6	Master's or doctorate (*Cursos de post grados*)	Bachelor's degree	Master's degree or doctorate	..	..	2–4	..	6–10		



PERU

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre primary (*Educación inicial*)			3	4–6	1–3			Compulsory for all 5 year olds
1	Primary (*Educacion primaria*)			6	12	6	6		
2A	Lower secondary (*Educacion secundaria*)	Primary		12	15	3	9		For the purposes of ISCED, the first three grades (7–9) of secondary education are reported as ISCED Level 2A.
2C	Vocational (*Ocupacionales*)	Primary or lower secondary	Certificate						
3A	Secondary, general (*Educacion secundaria*)	Primary		15	17	2	11		For the purposes of ISCED, the last two grades (10–11) of general secondary education are reported as ISCED Level 3A.
3B	Secondary, vocational (*Educacion secundaria*)	Primary		15	17	2	11		For the purposes of ISCED, the last two grades (10–11) of vocational secondary education are reported as ISCED Level 3B
4C	Officer school (*Escuela de sub oficiales*)	Secondary	Technical certificate	17					
5B	Tertiary, non university (*Superior no universitaria*)	Secondary	Technical and pedagogical certificates	17	20–22	3 or 5		3 or 5	
5A (1st, medium)	University (*Superior universitaria*)	Secondary	Bachelor's degree with or without *licenciatura* certificate	17	22	5		5	
5A (2nd)	Tertiary, specialization (*Programas de especialización*)	Bachelor's degree	*Licenciatura*	22	23	1	.	6	Students with bachelor's degrees can obtain a *licenciatura* certificate by presenting a thesis or continuing in a specialist programme.
5A (2nd)	Master's (*Maestria*)	Bachelor's degree	Master's degree	22	24	2		7	
6	Doctorate (*Doctorado*)	Bachelor's or master's degree	Doctorate	24	29	5		10–12	

ISCED97 Flows



PHILIPPINES

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre-primary	Birth certificate		3	6	3	..	..	
1	Elementary	Birth certificate	Elementary school leaving certificate	6	12	6	6	.	
2A	Secondary, general (years 1–3)	Primary/elementary school leaving certificate		12	15	3	9	..	
3A	Secondary, general (year 4)		Secondary school leaving certificate	15	16	1	10	..	
4A/B	Post secondary, technical and vocational	Secondary school leaving certificate	Certificate of proficiency	16	18–19	2–3	..	..	
4C	Post secondary, technical and vocational	Secondary school leaving certificate	Certificate of proficiency	16	17	<2	..	..	
5A	University	Secondary school leaving certificate	Associate of Arts	16	18	2	..	?	Agricultural technology, secretarial studies, business studies, fine arts, computer studies, midwifery, marine transportation, etc
5A (1st, medium)	University	Secondary school	Bachelor's degree leaving certificate	16	20	4	..	4	Many tertiary institutions require students to pass an entrance examination. Graduates of teacher training institutions are required to take an exam in order to practise.
5A (1st, medium)	University	Secondary school leaving certificate	Bachelor's degree	16	21	5	..	5	These long programmes include engineering and dentistry. Graduates are required to pass an exam in order to practise their professions
5A (2nd)	Tertiary, professional	Bachelor's degree	Professional qualification	20	24	4	..	8	These professional programmes include law and medicine. Graduates are required to pass an exam in order to practise their professions
5A (2nd)	Master's	Bachelor's degree	Master's degree	20	22	2	..	6	
6	Doctorate	Master's degree	Doctorate	22	24–25	2 or 3	..	8–9	

ISCED97 Flows



RUSSIAN FEDERATION

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Kindergarten			3	6	3			
1	Primary			6–7	10–11	3–4	4		
2A	Basic, general	Primary	Certificate 1	10	15	5	9	..	[illegible]
3A	Secondary, general	Certificate 1	Attestation	15	17	2	11		
4C	Post-secondary, vocational	Entrance examination, attestation	Certificate 2	17	18–19	1–2	12–13	..	
3B + 5B	Secondary, special technical (*technikum*)	Entrance examination, Certificate 1	Specialist's Diploma 1	15	19	4	13	2	Combines ISCED Levels 3B and 5B, Specialist's Diploma 1, first-stage tertiary education, technician training, teacher training, etc.
5B	Tertiary, special	Entrance examination, attestation	Specialist's Diploma 1	17	20	3	..	3	
5A (inter., short)	Tertiary, first stage	Attestation, Specialist's Diploma 1, entrance examination	Certificate of tertiary education, first stage	17	19	2	..	2	First stage of tertiary education attained by students who discontinue their studies.
5A (1st, medium)	Tertiary, basic	Attestation, entrance examination	Bachelor's degree	17	21	4		4	
5A	Tertiary, professional	Attestation, entrance examination	Specialist's Diploma 2	17	22–24	5–7	..	5–7	Duration from five years in economics and humanities to five to six years in engineering and seven years in medicine
5A	Tertiary, professional	Specialist's diploma	Specialist extended-education qualification	23–24	24–25	1	.	6–8	Further education for specialists who wish to improve their knowledge or obtain a second specialty.
5A (2nd)	University (*Magistratura*)	Bachelor's degree	Master's degree	21	23	2	.	6	Graduates may work as a scientist, secondary school teacher and at the tertiary level
5A	University, internship (*Internatura*)	Bachelor's of Medicine	Intern	24	25	1		8	Medicine.
6	Post graduate, university (*Aspirantura*)	Master's degree, Specialist's Diploma 2	Candidate of Science	22–24	25–27	3		8–9	
6	Doctorate (*Doktorantura*)	Candidate of Science	Doctorate	25–27	27–30	2–3		10–12	Requires defence of thesis offering new solutions to a major scientific/academic problem which is of substantial importance to the field or discipline

ISCED97 Flows



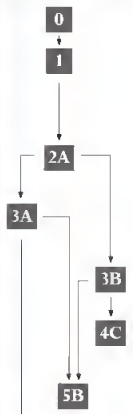
SRI LANKA

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Pre primary			4	5	1	...	...	Provided by some local governments and private organizations on a fee paying basis	0
1	Primary			5	10	5	5	.		1
2A	Junior secondary	Primary	Completion of junior secondary	10	14	4	9	.		2A
3A	Upper secondary, ordinary level (O-level)	Lower secondary	General certificate of education (O level)	14	16	2	11	.		3A
3A	Senior secondary, advanced level (A-level)	General certificate of education (O level)	General certificate of education (A level)	16	18	2	13			3B
3B	Technical and vocational	General certificate of education (O level)	Certificate	14	16	?	...	.		5B
5B	College	General certificate of education (O level)	Diploma or certificate	17	18–21	1–4	...	1–4		
5A (inter., short)	College	General certificate of education (O level)	Diploma or certificates, entrance to university	18	20	?	...	?	Includes primary school teacher training	5A
5A (1st, long)	University	General certificate of education (A level)	Bachelor's degree	19	22–25	3–6	...	5–8	Includes secondary school teacher training	
5A (2nd)	Master's	Bachelor's degree	Master's degree	22–25	23–27	1–2	...	6–10		
6	Doctorate	Master's degree	Doctorate	23–27	25+	2+	...	8+		6

THAILAND

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre primary			3	6	3	1–3	...	
1	Primary			6	12	6	6	.	
1	Basic education for adults		Adult basic education diploma	..	..	2	..	..	
2A	Lower secondary	Primary (Grade 6)	Lower secondary education certificate	12	15	3	9	..	
3A	Upper secondary, general	Lower secondary (Grade 9)	Upper secondary education certificate	15	18	3	12	..	
3B	Upper secondary, vocational	Lower secondary (Grade 9)	Vocational education certificate	15	18	3	12	..	
4C	Post secondary, non tertiary	Upper secondary school	Post secondary certificate	18	19–20	1–2	..	..	
5B	Tertiary, vocational	Vocational education certificate	Vocational education diploma	18	20	2	.	2	Some subjects are specifically designed for part time only.
5B	Tertiary, technical	Upper secondary education certificate	Bachelor's degree	18	22	4	..	4	
5A (1st, medium)	University	Upper secondary education certificate	Bachelor's degree	18	22	4	..	4	
5A (1st, long)	University	Upper secondary education certificate	Bachelor's degree	18	23–24	5–6	..	5–6	Most professional qualifications, including architecture, painting, sculpture, graphic arts and pharmacy (five years), medicine, dentistry and veterinary science (six years)
5A (2nd)	Master's, post-graduate	Bachelor's degree	Master's degree, graduate diploma	22	24–25	2–3	..	6–7	
6	Doctorate	Master's degree	Doctorate	25	28–29	3–4	..	9–11	

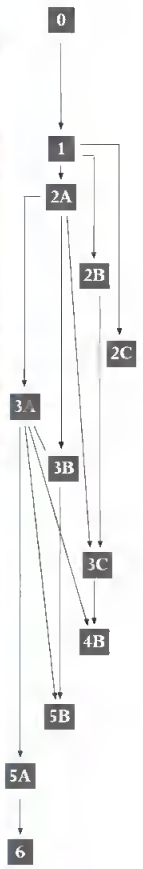
ISCED97 Flows



TUNISIA

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Kindergarten (*Rudh al Atfaal*)			3	6	3	..	..	
0	Pre primary (*Tahdhiry*)			5	6	1	..	..	Ministry of Education programme first introduced in the school year 2001/02
1	Primary (*Ibtidaary*)			6	12	6	6	..	
2A	Lower secondary, general (*Ii'daady*)	Primary with promotion to Grade 7	Basic education diploma	12	15	3	9	..	
2B	Lower secondary, professional (*Madaris al Mihan*)	Primary	Technical diploma	15	17	2	8	..	
2C	Lower secondary, technical (*Tadrib mihni*)	Primary	Certificate of apprenticeship	15	17	2	8	..	
3A	Upper secondary, general (*Thanawy*)	Basic education diploma	Secondary diploma (*Baccalauréat*)	15	19	4	13	..	
3B	Upper secondary, professional (*Takwin mihny*)	Basic education diploma	Certificate of Professional Aptitude (CAP)	17	19	2	11	..	
3C	Upper secondary, technical (*Takwin mihny*)	CAP or two years of general secondary	Professional Technician Licence (BTP)	17	19	2	13	..	
4B	Post secondary, technical (*Takwin mihny*)	Secondary diploma or BTP	Superior Technician Licence (BTS)	19	21	2	15	..	
5B	University (*Jaami'y*)	Secondary diploma (*Baccalaureat*)	Superior Technician Diploma	19	22	3	..	3	
5A (medium)	University (*Jaami'y*)	Secondary diploma (*Baccalaureat*)	Master's degree, engineering degree, specialty diploma	19	23+	4+	..	4+	
6	Doctorate (*Jaami'y*)	Master's degree or equivalent	DEA (*Diplôme d'Etudes Approfondies*), DESS (*Diplôme d'Etudes Superieures Specialisees*), Doctorate	23	25+	2+	..	6+	

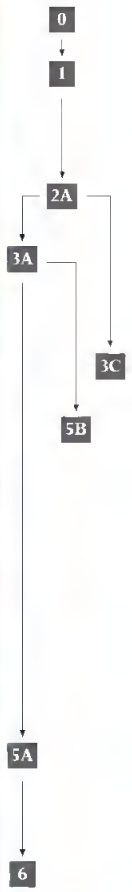
ISCED97 Flows



URUGUAY

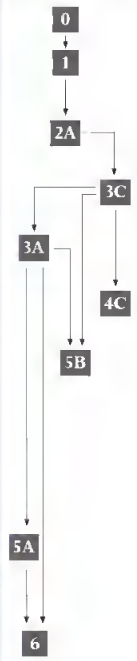
ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes
0	Pre primary (*Inicial*)			3	6	3	. . .	. .	Compulsory for 4 and 5 year olds
1	Primary (*Primaria*)		Primary education certificate	6	12	6	6	.	Compulsory for 6 year olds
1	Adult education		Primary education certificate	15+	18+	3	3	. .	
2A	Basic secondary (*Ciclo basico secundaria*)	Primary education certificate	Lower secondary education certificate	12	15	3	9	.	
3A	General (*Bachillerato diversificado*)	Lower secondary education certificate	Upper education certificate	15	18	3	12	. . .	Completion gives the right to enrol in the faculty which corresponds to the option chosen in the second year of diversified education (humanities, science or biology)
3C	Technical (*Bachillerato técnico*)	Lower secondary education certificate	Upper education certificate	15	18	3	12	. . .	
5B	University (*Carreras universitarias*)	Upper education certificate	Graduate diploma	18	20–22	2–4	. . .	2–4	Programmes to train midwives.
5B	Teacher training (*Magisterio*)	Upper education certificate	Primary teacher title	18	21	3	.	3	
5B	Secondary or technical school teacher (*Profesorado*)	Upper education certificate	Secondary or technical school teacher title	18	22	4	. . .	4	
5B	University (*Carreras universitarias*)	Upper education certificate	Professional qualification	18	21–22	3–4	. .	3–4	Librarians, public administrators, business administrators, nurses and military professionals.
5B	University (*Carreras universitarias*)	Upper education certificate	Professional qualification	18	23–25	5–7	. .	5–7	Fine arts, plastic arts.
5A (medium)	University (*Carreras universitarias*)	Upper education certificate	*Licenciatura*	18	21–23	3–5	.	3–5	
5A (long)	University (*Carreras universitarias*)	Upper education certificate	Professional degree	18	23–26	5–8	. . .	5–8	Dentistry, law, medicine, economics
6	Doctorate	University degree	Doctorate	22–24	23–26	1–2	. . .	6–10	

ISCED97 Flows



ZIMBABWE

ISCED97 level for WEI data collection	Country description of programme	Entrance requirements	Qualifications awarded	Typical starting age	Typical ending age	Theoretical duration of the programme	Theoretical cumulative duration – primary/secondary	Theoretical cumulative duration – tertiary	Notes	ISCED97 Flows
0	Pre-school			3	6	3	...	...		
1	Primary school		Primary school achievement test (Grade 7 certificate)	6	13	7	7	...		
2A	Lower secondary (Form 2)	Primary certificate	Junior certificate	13	15	2	9	...		
3C	Senior secondary	Junior certificate	Ordinary level (O level) certificate	15	17	2	11	...		
3A	Upper secondary	O level certificate	Advanced-level (A-level) certificate	17–18	19–20	2	11	...	Minimum entry requirement five O-level subjects.	
4C	Vocational	Grade 7, Form 2 and O level	Certificate	17–18	19–20	2	...	...		
5B	Teacher training	Five O-level credits or two A-level credits	Primary and secondary teaching certificate	17–18	20–21	3	...	3		
5B	Technical	O level certificate	Technical diploma	17–18	20–21	3	...	3	College-based training	
5B	Apprenticeship	O level certificate	Technical diploma	17–18	21–22	4	...	4	Industry based training	
5A (1st, medium)	University	A-level certificate	Bachelor's degree	19	22–23	3–4	...	3–4		
5A (2nd)	University	Bachelor's degree	Master's degree	22	25	3	...	6–7		
6	Doctor of medicine	A level certificate	Doctor of medicine	19	25	6	...	6		
6	Doctorate	Master's degree	Doctorate	25	28–29	3–4	...	9–11		



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Yash actively represented India in the WEI programme and his energy and valued expertise will be missed by all

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